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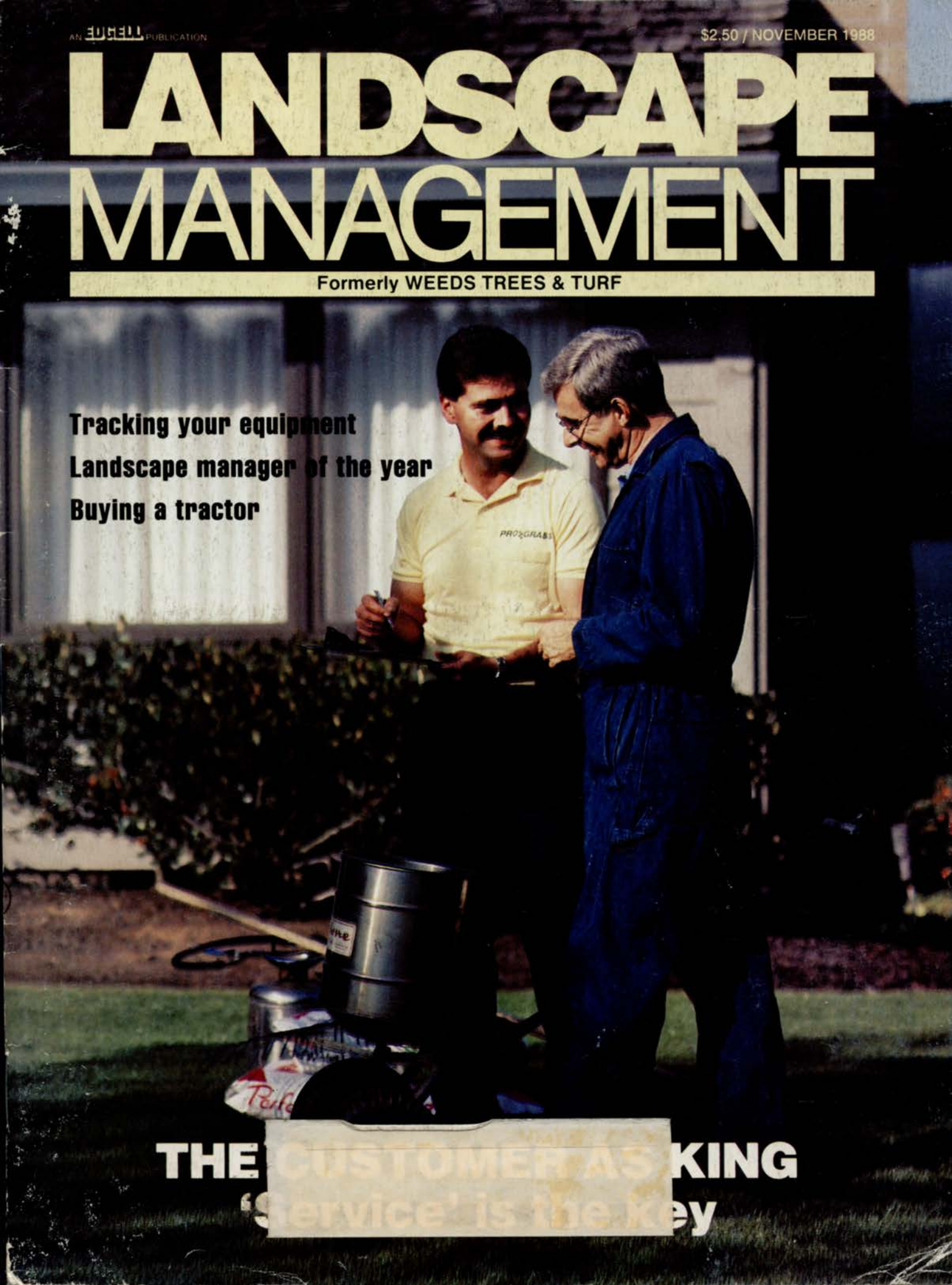
LANDSCAPE MANAGEMENT

Formerly WEEDS TREES & TURF



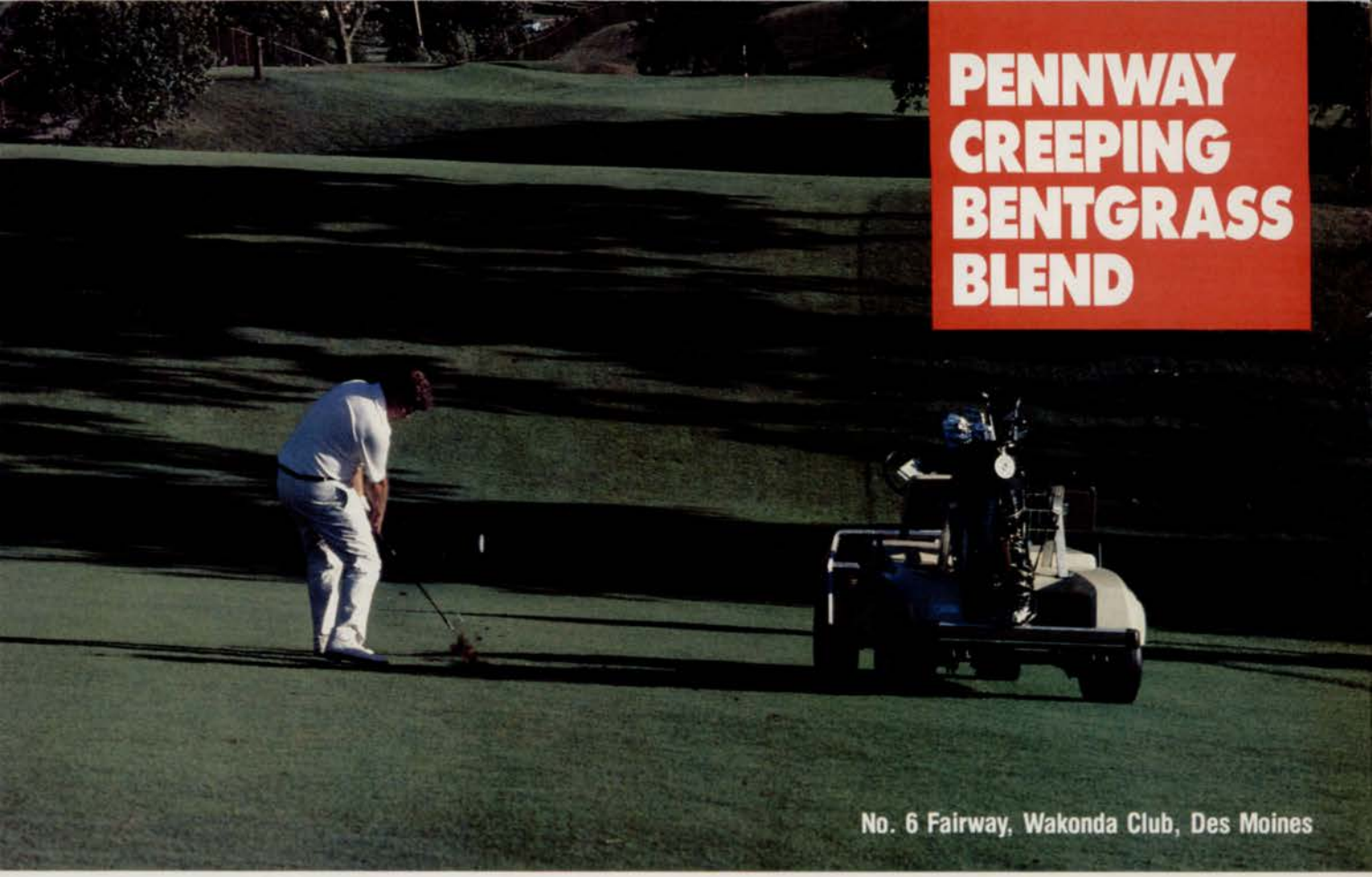
Tracking your equipment

Landscape manager of the year

Buying a tractor

THE CUSTOMER AS KING

"Service is the key



No. 6 Fairway, Wakonda Club, Des Moines

GIVE IT A DIVOT!

PENNWAY BLEND IS A HIT IN DES MOINES WHERE SUMMERS ARE HOT AND MEMBERS DEMAND PERFECTION.

Nick Dunn, Superintendent
Wakonda Club, Des Moines, IA

"When the membership at Wakonda Club in Des Moines voted to replace their bluegrass/poa fairways with creeping bentgrass, I wasn't certain of its availability. Leon Williams from Williams Lawn Seed assured me that he could get an adequate supply of Pennway blend from Tee-2-Green Corp. in Oregon. I knew Tee-2-Green for quality Penn products, but I wasn't positive about Pennway. When I found that Pennway is 25% Oregon certified Penncross, 25% certified Penneagle and 50% creeping bent also from Tee-2-Green, I elected to use it over other bent blends available.

After one year, our fairways look superb and the membership raves.

With our maintenance program, we have had no problem with thatch buildup, and we find that Pennway requires less water than our old bluegrass/poa fairways ... an important factor considering our droughty summer. Pennway? *Yes.* Give it a divot!"

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FOR FAIRWAY USE

CREEPING BENTGRASS BLEND
One of the 'Penn Pals'

Warren Bidwell is available to speak to your superintendents' group about Penn bentgrasses. Call our toll free number for details. **TEE-2-GREEN Corp.**, PO Box 250 Hubbard, OR 97032

Tee-2-Green Corp.
1-800-547-0255
FAX 503-981-5626

Circle No. 142 on Reader Inquiry Card

Shinnecock Hills Golf Club, Southampton, New York

Southern Hills Country Club, Tulsa, Oklahoma

Oak Tree Golf Club, Edmond, Oklahoma

Medinah Country Club, Medinah, Illinois

Another banner year for Betasan.

Once again, most of the country's top courses chose BETASAN.

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Or, maybe the reason is Betasan is the only preemergent crabgrass control that's safe for bentgrass and all other turfgrasses, including established bluegrass, fescue, perennial, annual rye, bermudagrass, Zoysia, bahia, centipede and St. Augustine.

Either way, for over 20 years Betasan has been earning the trust of the most demanding and knowledgeable golf course superintendents in the country.

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BETASAN is available in liquid formulation, as well as granular, to match any application need you may have.

For more information contact your local supplier, or call ICI Americas at 1-800-759-2500.

BETASAN

Trusted most by the best

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*Dacthal is a registered trademark of Fermenta Corp.
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BETASAN is also marketed professionally under the trade names Bensumec, Pre-San and Lescosan

How to handle w

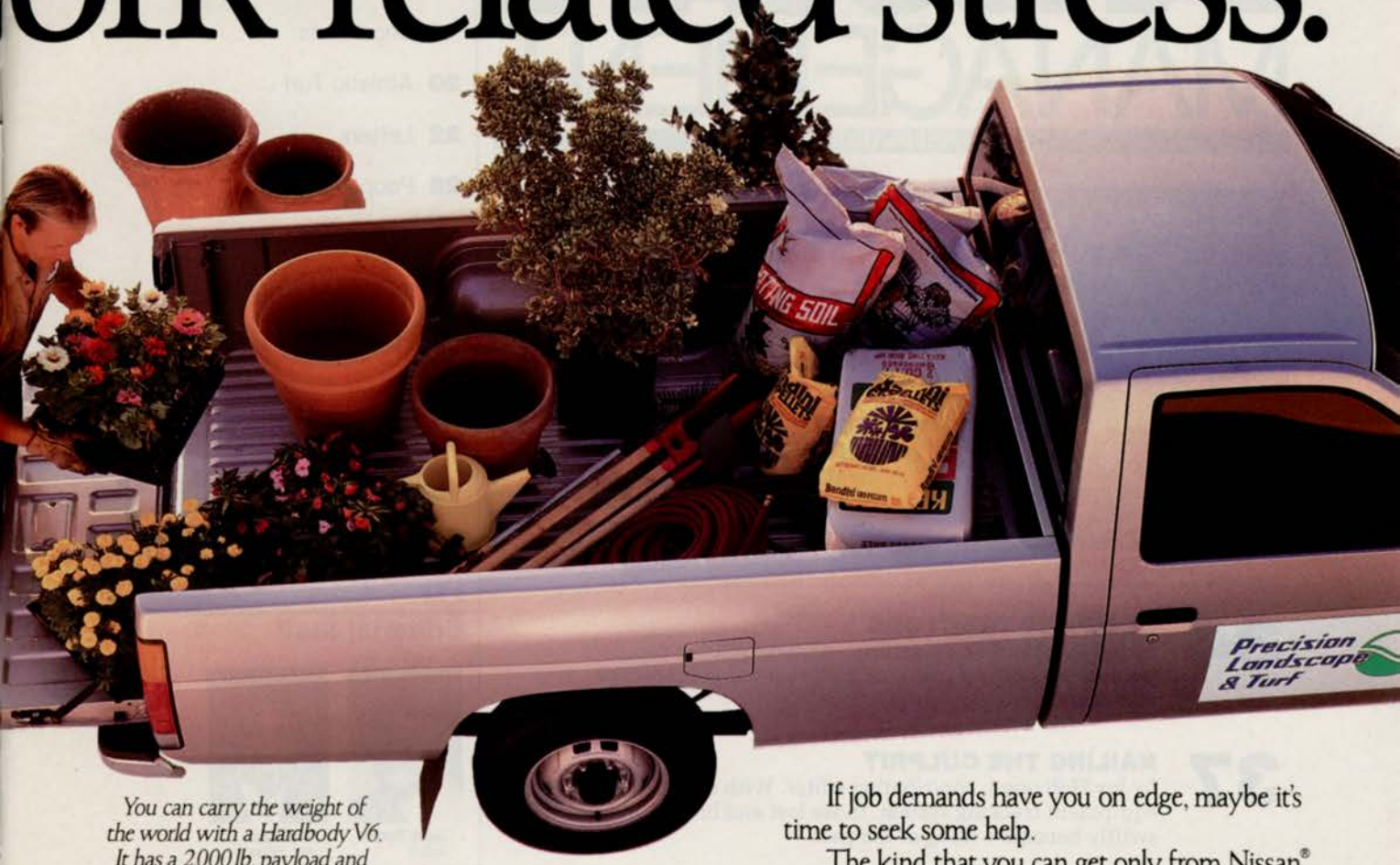
With the Hardbody's double-wall seamless construction and rust-resistant cargo bed, you don't have to worry when things pile up.

Who says cab rides have to be uncomfortable? Not Nissan. Our trucks have plenty of headroom and legroom.

Want to take it with you? Better get a Hardbody King Cab® 4x4. Its powerful engine lets you tow up to 3,500 pounds.

*Commercial Courier, North Carolina

ork-related stress.



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NOVEMBER 1988, VOLUME 27, NUMBER 11

LANDSCAPE MANAGEMENT

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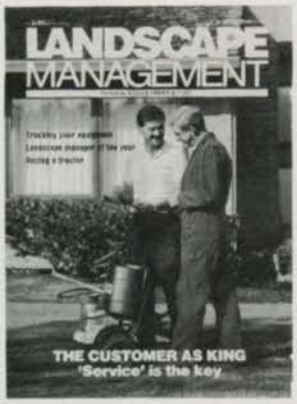

On the cover: Good lawn care companies, like Pro Grass, know how to treat customers. Photo by Larry Kassell.

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by Will Perry, managing editor. Today's saturated lawn care market demands that LCOs work harder to keep their customers happy.

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by Jeff Moehle. The versatility and flexibility of compact tractors make them ideal for budget-minded landscape managers.

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In getting the most out of his personnel and equipment, Roy Peterman made the Brigham Young University campus a model of good management.

50 **'LOVE THAT DIRTY WATER. . . '**
by Jeff Sobul. Improvements in treatment have made reclaimed wastewater a viable source of irrigation water, and a way to conserve valuable freshwater supplies.

58 **THE COST OF LAYOFFS**
by Rudd McGary and Ed Wandtke. To layoff or not to layoff? With the winter season coming up, it could increase your cash flow to lay off some employees until spring. But, in the long run, you may lose some customers next year.

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Circle No. 144 on Reader Inquiry Card

AS I SEE IT...

On being proud of your job

"There are a lot of great superintendents in the country."

These words from Milwaukee Country Club's Danny Quast, a superintendent himself, start the juices flowing. And there are a lot of other great landscape managers in the country, too. In my six years in the green industry, I've certainly met my share at conventions and in other travels across the land.

"You have to love this business and you have to be motivated," the likable Quast told me this summer, right in the middle of the driest, hottest drought in decades. "The members don't expect as much out of me as I do."

And that's the key.

If this is beginning to sound like a pep talk, maybe it is. Every once in a while, we all need a pep talk. A little "Vince Lombardi" to remind us that we're proud of what we're doing.

Just what is it that you're doing? You're beautifying our country. You're making it a pleasure for others to go to work. You're making it fun to take the kids outside on a nice spring day and roll around in the grass. You're making it a treat to take a day off from work and play a few holes of golf. In your own special way—think about this—you're making people more fully appreciate life.

And you're having fun doing it. You're not chained to a desk or locked in a room with a computer terminal. You, generally, are outside in the warm sunshine when many others are chomping at the bit to be unleashed.

Ken Erman is building supervisor at Edgell Communications. He is, typically, one of you. As he approaches retirement, he tells the story best.

"I've been at this all my life. I worked on a farm from the time I was nine. This *was* my life. I couldn't get enough of work."

Was it hard work, Ken?

"There are hard aspects. But it was worth it to see the product. To see the results.

"Maybe it's hereditary. My dad was a great one for flowers."

You're a landscape manager. You're historically a hard worker. Hereditary or not, you take pride in seeing the final product. Thank you, one and all. And keep up the good work.

Jerry Roche

Jerry Roche, editor

LM

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Circle No. 271 on Reader Inquiry Card

Burning turfseed fields means black plumes of smoke and possible danger for motorists.

SEED

Seed prices could escalate if legislation to limit field burning is passed in Oregon

Oregon seed farmers have been "feeling the heat" lately. Field burning, a key part of turfseed growing operations, was cited as the cause of a horrifying traffic accident on Oregon's I-5 in August. Heavy smoke from the field blew across the highway near Albany, decreasing visibility like a curtain of heavy fog.

Shortly after the crash, in which seven people were killed and 38 injured, the Oregon Department of Environmental Quality (DEQ) banned field burning within a ¼-mile of all interstate highways. Since then, the ban has been expanded to a ½-mile "fire safety buffer zone" along I-5, with burning banned completely in the first ¼-mile of the zone. Burning in the second ¼-mile can take place only with increased state regulation. In addition, seven other highways in the state will be lined by a ¼-mile buffer zone with burning banned within the first ⅛-mile.

The new rules were issued via a 180-day Administrative Order that will be in effect until mid-February. After that time, the issue will again come before the DEQ for renewal.

"Ever since the accident occurred, people previously tolerant of field burning have come out in opposition to it," says Dave Nelson, executive director of the Oregon Seed Council. The primary opponents are groups called End Noxious Unhealthy Fumes (ENUF), Oregonians for Clean Air, and Residents of Oregon Against Deadly Sprays and Smoke.

Members of these groups and others were among the 60 people present at a September public hearing where a state legislative committee heard the strongest opposition yet voiced against the 40-year-old practice of field burning. Opponents have joined forces with state Sen. Grattan Kearns (D-Eugene) in proposing legislation seeking to ban field burning.

The state's emerging resistance to field burning has been more intense than that of the 1960s and 1970s when the state gained regulatory control of field burning and limited the practice to about 65 percent of the valley's grass fields. The heat of the current debate led Bill Rose, owner of Turf-Seed Inc., to quip: "Oregon's seed industry is respected all over the world—every place but Oregon."

Nevertheless, Nelson is preparing to give the seed producers their fair say. "The industry is organizing to represent itself thoroughly," said Nelson. However, "there's no doubt in my mind that if field burning survives these attempts at banning it, the present rules will remain."

Dennis Glaser, a seed farmer who owns more than 5,000 acres in the Willamette Valley, agrees that the days of field burning are numbered. "I don't know that it's going to be this year," he said, "but I'm not optimistic. I'd say the practice will end within the next three years."

The challenge for farmers, says Glaser, will be to produce the quality seed people have come to expect from Oregon without the benefit of burning, which reduces the threat of diseases (such as ergot and blind seed disease) and keeps prices down.

"Our future yields will be less, that's a given," adds Glaser. "Burning does unexplained things to a plant. There isn't a mechanical way we know of that would do the same thing."

The current Administrative Order covers approximately 30,000 to 40,000 acres of seed fields. Owners of these fields may have to resort to alternative methods of field sanitation: propane burning, chemical spraying, crew cutting and bailing. All cost $50 to $70 more per acre than field burning.

Nelson and Glaser agree that a sense of urgency exists among Oregon farmers and university researchers to find an alternative to field burning.

"We're not happy about what has happened, but don't write us off," adds Glaser. "We're good learners and will do what we have to do to continue to produce the best quality seed in the world."

—Will Perry

SHORT CUTS

LANDSCAPING

Carpenter takes on North Carolina DOT

Joe Carpenter of Landmasters, Gastonia, N.C. has filed an appeal with the U.S. Court of Appeals in his case against the state and federal departments of transportation involving minority set-aside regulations.

Carpenter

The case involves the federal Disadvantage Business Enterprise (DBE) regulations, which mandate that at least 10 percent of funds for public works projects be awarded to minority firms. Carpenter is challenging their constitutionality on grounds that provisions of the Surface Transportation and Assistance Act create a system of racial preferences in awarding public contracts for highway construction projects.

Carpenter, former president of the Associated Landscape Contractors of America, believes that these programs result in a system of racial quotas which prime contractors must fulfill to avoid a risk of losing federally-funded state contracts.

More than 20 lawsuits have been filed challenging the constitutionality of the 10 percent quota requirement, which was originally implemented as part of the Public Works Employment Act of 1977. In 1982, the Surface Transportation Assistance Act was passed with such a quota.

RESEARCH

Thatch build-up is found in fescues

Researchers at the University of California/Riverside report more thatch build-up than expected in new turf-type tall fescue varieties included in the three-year-old National Variety Trial there.

Thatch was present in all 39 tall fescue varieties included in the trial, ranging in thickness from 0.64 to 1.14 inches.

"Generally, the pasture-type varieties developed the least thatch, while the newer turf types, including dwarf varieties, accumulated the most," reports Matt Leonard, Ph.D.

continued on page 14

THE FATE OF N... What happens to the nitrogen you're applying to the turf three or four times a year? According to Marty Petrovic, Ph.D., of Cornell University, about 60 percent of the nutrient is taken up by the plant, under ideal conditions. Here's where the rest goes: 14-20 percent is stored in the soil, 21-35 percent is stored in the thatch, 7-15 percent is lost to the atmosphere and anywhere from 2-85 percent is lost due to denitrification. Petrovic revealed these statistics at the 65th anniversary Lofts Seed Field Day.

DISEASE UPDATE... Agri-Diagnostic Associates has improved its popular turf disease detection kit. Formerly, the test took 3½ hours; the new test takes just 10 minutes. The kit, which uses the same technology, will be available April 1, 1989, according to Vonnie L. Estes, who is in charge of market development. For more information, write 2611 Branch Pike, Cinnaminson, NJ 08077 or call (609) 829-0110.

THEY'VE BEEN ENDO-ED... You want a perennial ryegrass with high insect-resistant endophytes present? Try these: SR 4000, SR 4100, Citation II, Commander, Dasher II, Repel or Sunrye. According to 1986 national tests conducted by C. Reed Funk, Ph.D., at Rutgers University in 1986, these varieties were highest in endophyte content.

VIDEO ARTICULATE... Mike Tanzini and Greg Frank have been selected by WXXI-TV, Channel 21 in Rochester, N.Y. to participate in "New York Lawn & Garden," a weekly question-and-answer show. Viewers are encouraged to submit samples of problem plants and insects for diagnosis and recommendations. Along with Tanzini and Frank, cooperative extension agent Jim Wilmot answers the questions. The panel also answers call-in questions and plans several remote broadcasts from area malls for on-camera questions and answers. Tanzini and Frank, vice presidents of Ted Collins Tree & Landscape, were selected from open auditions.

DETOUR TO DISNEY... For the first time in Walt Disney World history, landscape professionals can get an in-depth look at the entire Disney World horticultural operation in the new "Landscape Magic" seminar. Experts from the Disney staff will serve as instructors and guides for the three-day seminar, which begins Jan. 29, 1989. Registration fee is $685, which includes special rates on accommodations at the Contemporary Resort. For more detailed information, write Seminar Productions, Disney World, Dept. PR, P.O. Box 10,000, Lake Buena Vista, FL 32830, or call (407) 828-1500.

OVER THE COUNTER... LawnAmerica Inc. has completed an initial public offering of its securities with South Richmond Securities Inc. as the underwriter. The offering consisted of 500,000 units priced at $3 each. Each unit consists of two shares of common stock and one common stock purchase warrant. LawnAmerica is a full-service lawn/landscape company based in Tulsa, Okla.

Finally, A High Ca Doesn't Handle L

For too long, high-capacity mowers have left a lot to be desired. But now all that has changed. Presenting the revolutionary new Groundsmaster® 580-D with an 80 hp turbo-diesel engine. The first large-scale rotary mower that combines the productivity of a 16-foot machine with the handling ease of a smaller mower.

Operating the 580-D is incredibly easy. Only Toro provides an adjustable tilt steering wheel and column. All controls are at the operator's fingertips, even cruise control.

Transport is easy too. An exclusive rotating hinge lowers the outboard cutting units behind the operator for a clear view to the side and rear. A balanced design allows you a stable 20 mph transport speed because the weight of the outboard cutting units is rotated to the rear.

Digital readouts display vital engine/machine functions at the touch of a button.

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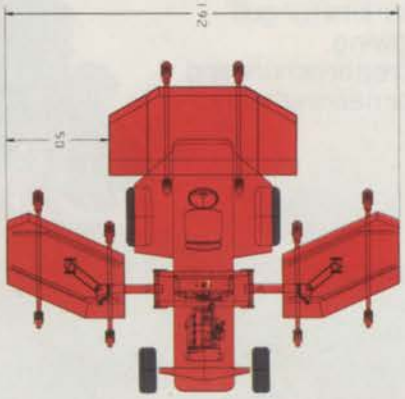
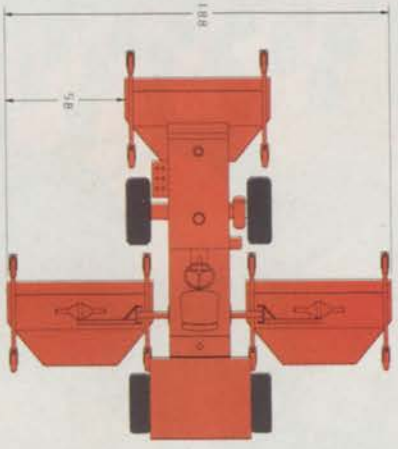
pacity Mower That ike A School Bus.

Toro's outboard cutting units also include an exclusive break-away protection feature. Should the operator misjudge distance, the wings will pivot away from the object that has been hit.

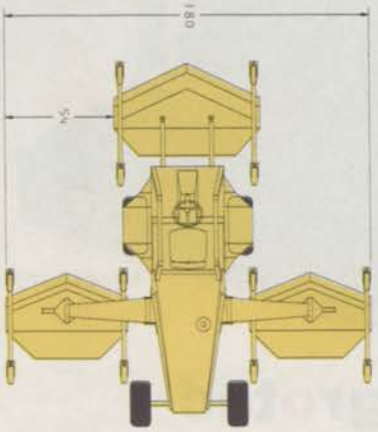


The 580-D's wide stance and short wheelbase give it maneuverability and stability. A short 76" wheelbase lets you turn an 18" uncut circle without braking. And Toro's exclusive swept-forward wing design keeps the tips of the outboard cutting units in line with the front drive wheels improving operator control and visibility.



For even more versatility, the 580-D includes these accessories: an 8-foot front broom attachment, a roll over protection system, a canopy, a cab and a road light package.

If you've been sacrificing ease of operation for high capacity, it's time you saw the revolutionary machine that gives you both: the new Groundsmaster 580-D from Toro. Call your local Toro distributor to see the Groundsmaster 580-D or contact Toro at the address below. You'll see firsthand how productive and versatile large-scale turf mowing can be.



Another Toro exclusive allows you to raise one or both of the outboard cutting units inside the traction unit width. The 580-D can then trim between objects less than 8 feet apart with the 92" Triflex® cutting unit.

TORO

The Professionals That Keep You Cutting.

The Toro Company, Commercial Marketing Services, 8111 Lyndale Ave. So., Minneapolis, MN 55420.

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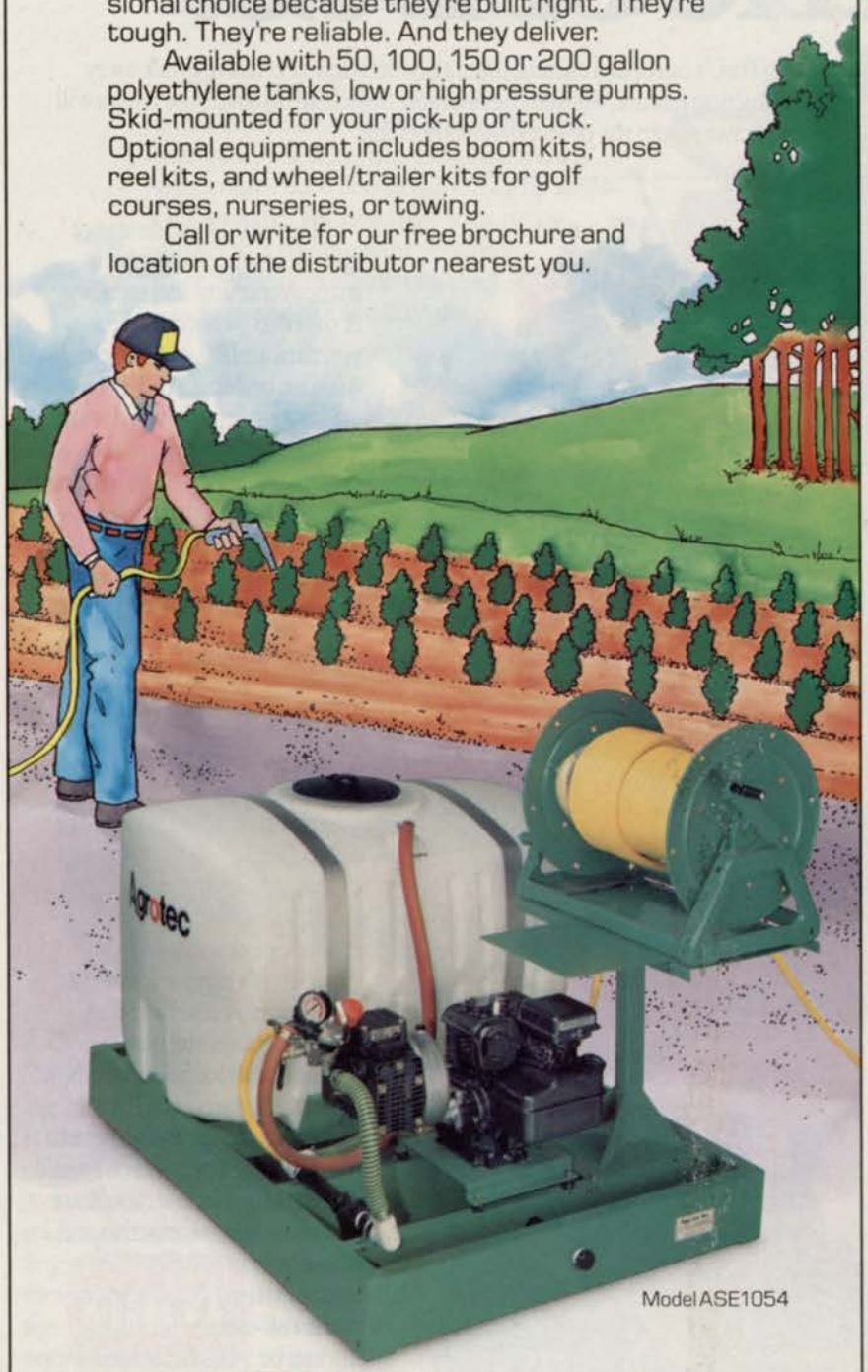
Call or write for our free brochure and location of the distributor nearest you.



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THATCH *from page 11*

Leonard, UCR botany and plant sciences staff research associate, said that the thatch build-up was noticed while soil cores were being taken to measure tall fescue rooting depth. This triggered a sampling of the 39 varieties for thatch thickness.

Cluster analysis produced two significantly different groups of fescues with respect to thatch thickness and four groups of varieties based on turf texture. Results by variety are presented in an article titled "Thatch Accumulation in Tall Fescue Varieties," in the UC publication *California Turfgrass Culture*, Vol. 37, Nos. 3, 4, 1988.

"Thatch thickness and turf texture were positively correlated," Leonard notes, "supporting the hypotheses that the new, finer textured tall fescue varieties tend to accumulate more thatch than the older forage varieties." The UCR study is not considered to be conclusive, he added, but it does point out a trend in tall fescue thatch accumulation that warrants further study.

ACADEMIA

Ohio State offers equipment curriculum

A college program that teaches technicians to operate outdoor power equipment will be offered at The Ohio State University.

Horticultural Power and Equipment Technology will be taught at OSU's Wooster branch, beginning in the fall of 1989.

Students completing the two-year program that includes an internship will receive an Associate of Applied Science degree.

General education courses including communications skills, math, physics and microcomputers will be balanced with hands-on and classroom studies of engines, hydraulics, power transmission, and servicing specialized horticultural equipment.

In addition, the students will receive basic training in one of three areas: turf, landscaping or nursery.

Anyone interested in more information about the program can call Fred Lendrum at (216) 264-3911 or toll-free in Ohio (800) 647-8283. The address of the OSU-Wooster campus is 1328 Dover Road, Wooster, OH 44691.

LAWN CARE

Tru Green buys Texas operation

Tru Green Corp. has purchased Greenkeeper Inc., a San Antonio-

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Spread it your way.

based lawn care company with branches in Oklahoma City, Dallas, Austin and Houston. Tru Green has nearly doubled its size through acquisitions since last year. This move marks the second time this year that the company has acquired a competitor with revenues of more than $1 million.

The Greenkeeper name will be kept for the time being, says company founder James Eckhardt. The company's 55 employees will also remain and Eckhardt will continue to run the operation.

Eckhardt says he was not actually looking to sell when Tru Green approached him. "A lot of it was the people," Eckhardt says. "There's going to be a lot of opportunities for our employees."

BUSINESS

Florida helps fill drought damage gap

Reports from nursery plant producers in the Midwest indicate the drought of 1988 and searing heat may have inflicted heavy damage.

Earl Wells, executive vice president of the Florida Nurserymen and Growers Association (FFGNA) said initial indications received this fall point to a 30 percent loss of nursery plant materials in the Midwest. Most nurseries in the impacted areas do not have irrigation.

Wells says that Illinois, Indiana and Michigan were hit particularly hard. He adds that Florida growers will move to fill the gap left by the drought damage.

"We're certainly sympathetic to the drought victims of those states," he says, "but at the same time, if there is a need to be filled, Florida would be in a position to supply some types of plant material which are compatible with conditions in those states."

Florida is a major supplier of woody ornamental plants to many Northern states and the largest supplier of foliage material in the nation.

LANDSCAPING

John Moulder (left), president of Moulder Bros., receives a bronze plaque from Duane Bartlett, president of parent company Earthmark Industries, Commemorating Moulder Bros.' 50th year in the landscape industry.

Moulder honored for 50 years of service

Glendale, Calif.-based, Moulder Bros. recently celebrated its 50th year in the landscape contracting industry.

The half-century has been a distinguished one, growing from a door-to-door operation started by by Paul and John Moulder in 1937 to a corporation which did $20 million in business in 1987.

The company received numerous design awards over the years. Twice John Moulder, who took over full responsibility for the company in 1970 after Paul passed away, travelled to the White House to receive special citations. The company's work also received recognition from three national industry organizations and four California industry groups.

Moulder Bros. touch has reached such projects as Dodger Stadium, the J. Paul Getty Museum, Sea World and portions of most southland freeways in the Los Angeles area.

As John Moulder nears retirement he is beginning to turn over operations responsibilities to his management staff, which totals 150. Undoubtedly, the transition will be smooth and Moulder Bros. will continue to prosper beyond the end of its first century of business.

GOLF

Who to maintain your course for?

Superintendents of golf courses which host professional events must make up their mind: Are you maintaining your course for tournament and guests, or are you maintaining it for the everyday player?

This revelation from Daniel Pierson of Cherry Hills Country Club in Englewood, Colo., site of three Opens and two PGA championships.

"The first year I was here, we tried to alleviate some of the complaints from members by reducing some of our tournament conditions," says Pierson, who moved his fairway mower settings from ¼-inch to 9/16-inch. "It sure takes off a lot of pressure from the everyday comments you get from members. They really recognize that we're doing it for them, and they appreciate it.

"And I haven't heard anybody give us any complaints about flier lies. The lower handicap members were very concerned that we would, in going to higher cut fairways, have worse playing conditions for them. So far, it hasn't worked that way."

The tees, however, are a different story.

"We kind of sold our soul a little bit," Pierson notes. "I water to support conditions of play and not to support agronomic conditions. I consider that a bit of a compromise."

SEED

NuMex closer to landscape market

Seed yield on a variety of Bermudagrass developed at New Mexico State University has brought the grass a step closer to commercial use.

Arden Baltensperger, professor of agronomy and horticulture who developed NuMex Sahara, says the grass produced a good seed yield on a breeder field. Since June, approximately 100 acres of foundation field have been planted in Arizona and

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southern California.

"I hope this new variety will be of good use on golf course fairways, city parks and other large areas where seeding is the preferred method of establishment," Baltensperger notes. (See Nov. 1987 LANDSCAPE MANAGEMENT.)

Royce R. Richardson, president of Farmer Marketing Corp., notes that in 1987 some 70,000 NuMex Sahara plants were hand-planted on the 2.5-acre breeder field. "It's all up and it looks very good." Richardson says. "We will have certified seed available to the public in July 1989."

The company was to begin taking orders for NuMex Sahara seed at the Western Seedsman Association trade show in Kansas City Oct. 29 to Nov. 1. The company plans a major advertising campaign.

Correction

LANDSCAPE MANAGEMENT's September Buyers Guide incorrectly listed Sandoz Crop Protection as Zoecon-Sandoz Crop Protection. Sandoz manufacturers Mavrik Aquaflow for turf and tree insects, and Pentac Aquaflow for mites.

For future reference, please adjust your copy of the Buyer's Guide accordingly.

GOLF

Lyon to run for GCSAA presidency

Dennis D. Lyon has been selected by a nominating committee to run for president of the Golf Course Superintendents Association of America (GCSAA). The election will be held at the annual convention and trade show Feb. 13, 1989 in Anaheim, Calif.

Lyon is a certified golf course superintendent for the City of Aurora, Colo., Golf Division.

Running for vice president will be Stephen G. Cadenelli of Metedeconk Golf Club, Jackson, N.J. and Gerald L. Faubel of Saginaw (Mich.) Country Club.

Nominated to run for directorships are Gary Grigg of Shadow Glen Golf Club, Olathe, Kans.; Randy Nichols of Cherokee Town and Country Club, Dunwoody, Ga.; Michael Wallace of Hop Meadow Country Club, Simsbury, Conn. and Randy Zidik of Rolling Hills Country Club, McMurray, Pa.

The president and vice president are elected to one-year terms and the directors to two-year terms. Three directors will be elected. The president will appoint a secretary-treasurer after the election.

In related news, the GCSAA membership surpassed 8,000 for the first time in history this August.

"I believe the association's high visibility within golf is one factor contributing to growth," notes president John A Segui. "At the same time, our continued increase in membership has also allowed the association to provide more benefits and services, which in turn has steadily attracted still more members."

GOLF

GCSAA to offer management system

The Golf Course Superintendents Association of America has contracted with Hall-Kimbrell, an environmental consulting firm, to develop an environmental management system for the golf course industry.

The package will include an environmental self-audit questionnaire and notebook along with videotape training materials designed to provide management assistance. The materials deal with subjects like pesticide use, storage and disposal, underground storage tank regulations, OSHA requirements and general risk management. Completed self-audit materials will be individually reviewed by Hall-Kimbrell's profes-

continued on page 22

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ATHLETIC TURF

On the road again

LANDSCAPE MANAGEMENT technical advisor Kent Kurtz, Ph.D., executive director of the Sports Turf Managers Association, recently returned from a trip to England and Scotland. Kurtz visited the Institute of Groundsmanship (IoG) trade show, saw tennis at Wimbledon, racing at Ascot, soccer at Wembley Stadium and had a chance to visit with old friend John Souter. Watch for Kurtz's observations in an upcoming article in this magazine.

"I had fun," Kurtz says. "I've got plenty to write about."

Clay leads to less maintenance

The artificial OmniTurf infield at Boardwalk & Baseball in Orlando, Fla., is doing well, thanks in no small part to George Toma, who took several weeks last spring preparing for the Kansaas City Royals' first spring training season there.

Toma and the stadium crew used gumbo clay under the surface of the pitcher's mound and home plate to improve footing. As a result, the crew has reduced its daily repair work from six inches to only one inch.

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"The secrets of groundskeeping are being told."

That said by Jim Anglea of Texas Rangers Stadium during a talk at the Sports Turf Managers Association meeting recently. Anglea told the association membership some secrets himself.

"The key to success is drainage. You've got to get the water off the field," he said. And the way to do that is to put a crown on the field from centerfield to home plate. Anglea does it with a laser grader.

Anglea also said, "You have to improvise. You've got to change your schedule."

STMA gets together

The Sports Turf Managers Association annual meeting will be held at Vero Beach, Fla. from Jan. 13-15, 1989. Included in the meeting at the NL West champion Los Angeles Dodgers training complex will be educational sessions, a trade show and an awards banquet.

Dodgertown features 27 golf holes, a conference center and guest rooms for attendees. For more information, contact Melissa Merritt at the STMA. Phone (714) 981-9199.

Field fertilization

Getting the right fertility program for a baseball or football field is not an easy task. Especially if you've centerfielders who can run 4.5 forties and offensive linemen checking in at almost 300 pounds.

"To maintain the grass, you've got to fertilize it like you would a fairway—knowing that it will be abused," says David Frey of Cleveland (Ohio) Stadium. Team schedules, weather, and traffic from special events all contribute to make application a complex decision.

Next month, Frey and veteran athletic turf manager Harry Gill of Milwaukee County (Wisc.) Stadium share some of their "tricks of the trade" in the pages of LANDSCAPE MANAGEMENT.

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LETTERS

To the editor:

With due respect to the reports of my contemporaries on the subject of "The Black Death" (August issue), permit me to offer my opinion on the element that seems to be lacking.

Layers occur by intent or by the migration of finer particles. In soil growing media, migration is hindered by the presence of aggregates, produced by the process known as "flocculation," enhanced by the presence of aerobic micro-organisms. In their absence, plants growing in a medium of high rates of infiltration, percolation and drainage, it follows that, with reduced water-holding capacity in the medium, irrigation is needed in quantity. The rapid movement of water tends to assist the finer particles to migrate. In a system that embraces flocculation, it appears that the grape-like clusters of fine particles, acting as large particles with ample pore space, may prevent migration to a considerable degree.

To sustain a thriving biological complex, it is necessary to provide the essential nutrients, which, for the most part, are organic in nature. This implies a totally different system of management, one that is in harmony with the age-old processes of nature.

High sand content of soils in putting greens that were "easy to keep" was a feature of field research conducted at Beltsville in the '50s with co-workers Radko and Wilson. Cup-cutter cores from greens were collected and analyzed for sand content. Low sand content characterized the greens "hard to keep." The "easy to keep" greens showed many large pore spaces in photographs of thin slices of the profile.

This study, lacking final conclusions, was dropped in 1953. It may have contributed to the notion that, if high sand content in a soil is good, why not use all sand? It must be remembered that this was in an area where topdressings contained organic matter and organic fertilizers were in vogue. The biological nature of soil in the "easy to keep" greens was not determined, but it was thought to be high.

Fred V. Grau
Consulting Agronomist
College Park, Md.

To the editor:

Since 1986, I have been increasingly active on a broad range of environmental issues. My experience thus far indicates that *generally* speaking, most people who manufacture, distribute, sell and/or apply pesticides are not very interested in alternatives like integrated pest management (IPM).

Officials with the North Carolina Department of Agriculture see no problems at all with the safety of pesticides. If it were not for many concerned individuals, I doubt very seriously that the state would be developing guidelines for monitoring wells for pesticide contamination. community feel that many major corporations really don't care about environmental quality, and conversely, organizations like 3PF feel that we environmentalists are a misguided group with sinister motives. Is it any wonder that people on both sides of the fence get frustrated?

I would like to point out that pesticides are not the only reason for problems in the environment. They are, however, part of the problem. We are all responsible for what happens to this planet, individuals as well as industry.

I employ IPM in my business, and have found it to work very well. I use the best cultural practices I am familiar with, and I only use pesticides as a last resort. The only materials I use are insecticidal soap, a sulphur-based fungicide/miticide, dormant oil and strategic use of Roundup. I am doing a lot more hand-weeding, and I intend to use a product called "Sharpshooter" (Safer Co.) for weed control as soon as it is available in concentrate form.

Robert Mulder
Amsterdam Landscaping
Raleigh, N.C.

To the editor:

I sometimes wonder why the controversy exists concerning "VNS" (Variety Not Stated) seed.

For years, the terms "common" or "commercial" existed and described seed which was being sold as seed of that kind. Any reference to variety was reserved for seed being described with a certain variety name, either of pedigreed and sometimes non-pedigreed status.

More recently, sophisticated and astute seed buyers have come to recognize the merits of seed certification, and the guarantees inherent when specifying "certified seed." It would seem that this is all that is really needed; "common" or "commercial" seed to describe any seed which is not seed of an identifiable variety and one of the pedigreed grades. Pedigree seed merits the variety being part of its name.

"VNS" seems to be some kind of implication that this non-descript seed may possibly possess some varietal traits and characteristics. I do not believe it can be both ways, and disagree with messrs. Oliger and Roberts in attempting to justify anything other than "common" status for "common seed."

Finally, I would point out that it does not really matter whether you are dealing with a "reputable" or "non-reputable" wholesale distributor. If a buyer is not taking advantage of the assurances inherent with pedigree seed, then caveat emptor—buyer beware.

Martin C. Pick
Otto Pick & Sons Seeds
Ontario, Canada

GCSAA *from page 17*

sional staff to provide specific recommendations and analysis.

The GCSAA reports that the system is expected to cost less than $1,000, a substantial savings when compared to the cost of an environmental audit, which can exceed $10,000.

INDUSTRY

Safer adds a pair of new east and west centers

Safer Inc., a leading researcher and manufacturer of naturally-based pesticide and plant care products, is expanding.

Safer has a new west coast distribution center in Ontario, Calif. that serves Washington, Oregon, Montana, Idaho, California, Nevada, Utah, Arizona, Alaska and Hawaii. This plant will cut deliveries to those states up to seven days.

Safer's new Camp Hill, Pa. facility allows the company to deliver product within three days to New England, New York, New Jersey, Pennsylvania, Maryland, Ohio, Virginia and West Virginia.

Safer, with headquarters in Wellesley, Mass., manufactures and distributes insecticidal soaps, moss and algae killers, a sulfur-based fungicide, a herbicide, insect traps, leaf cleaners and plant protectants to the green industry. **LM**

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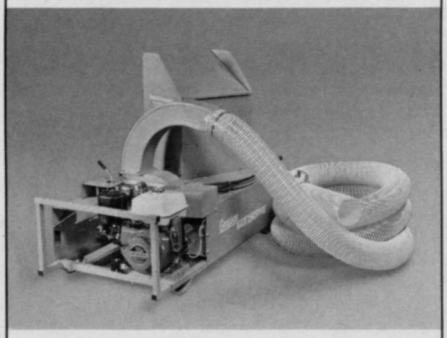

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PEOPLE

Nick C. Toscano, University of California Riverside's extension entomologist, has been appointed associate dean for Cooperative Extension in the Division of Agriculture and Natural Resources. Toscano has published more than 70 articles in scientific and semi-scientific journals.

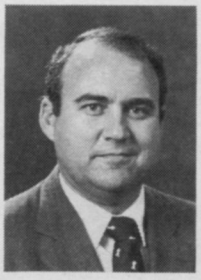
Harold Pellett, professor of horticultural science and landscape architecture at the University of Minnesota Landscape Arboretum has received the Norman Jay Colman Award from the American Association of Nurserymen. The award recognizes outstanding achievement in horticultural research.

Dwayne Ingram, professor and extension specialist in ornamental horticulture at the University of Florida, received the Nursery Extension Award. **Clifton Comstock** of Monrovia Monrovia Nursery Co. in Azusa, Calif., won the AAN's Wholesale Plant Salesman of the Year Award. **Paul Smeal,** professor of horticulture and extension specialist at VPI-SU, won the L.C. Chadwick Educator's Award. **Henry Spalding** won the Garden Communicator's Award.

E. Thomas Smiley joined the Bartlett Tree Research Laboratories as plant pathologist and soil specialist. Smiley received his Ph.D. from Michigan State University in those areas. He was previously with ACRT Environmental Specialists.

Alston Legare Van Ness has been appointed director of marketing for the National Club Association. Van Ness holds a bachelor's degree in history from the College of Charleston, and has specialized training in the master's program at the University of Dallas.

Ron Zwiebel has joined Lesco as a



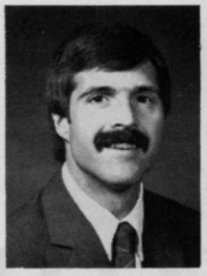
Ron Zwiebel

Jerry Kraft

fertilizer and seed specialist serving Alabama, Tennessee and central Georgia. Zwiebel was previously president and founder of Green Care Lawn Service. The company is now being run by his wife, Marlene.

Internationally recognized horticulture research scientist and professor at Clemson University, **D.C. Coston** has been named associate dean/director of the S.C. Agricultural Experiment Station. Coston replaces **Absalom Snell**, who retired from the post this year after serving the station for 39 years.

Long-time association executive **George Rose** retired after more than 50 years in the horticulture industry, including 24 years with All-America



Larry Kuhl

George Rose

Rose Selections. He was named executive secretery in the 1960s, a position he held until his retirement.

The Chemical Producers and Distributors Association has a new board of directors: chairman of the board is **Richard Mille** of Prentiss Drug and Chemical; first vice chairman is **Rusty Griffin** of Griffin Corp.; second vice chairman is **Bobby Pace** of Helena Chemicals. **Warren E. Stickle, Ph.D.,** moves from executive director to president. **Rick Davis** of SureCo will serve as secretary.

Suzanne Klaus of Klaus Greenhouse, Greenwood, Mo., is new president of the National Association of Women in Horticulture. Other officers are **Betty Hensinger, Patricia Kish, Kathy Freeland, Linda Barnett, Lisa Macky and Mary Lu Parks.**

Ransomes has announced the promotion of **Larry Kuhl** to vice president of manufacturing. Kuhl is a graduate of the University of Wisconsin-Madison who joined Ransomes in 1977 as plant manager.

Timothy Zink has been maned vice president of Safer's newly-formed Commercial and Agricultural Division. Zink comes from the Sandoz Crop Protection Division where he was vice president of marketing.

Jerry Kraft has been named vice president of sales for KLM Bio-Systems, a company that produces organic lawn care products. Kraft has been with KLM since 1984; prior to that, he was with O.M. Scott & Sons.

Robert P. McLain is new service coordinator for Tecumseh Products' Engine and Transmission Group Service Division. McLain is a Kent State University graduate with a bachelor's degree in marketing.

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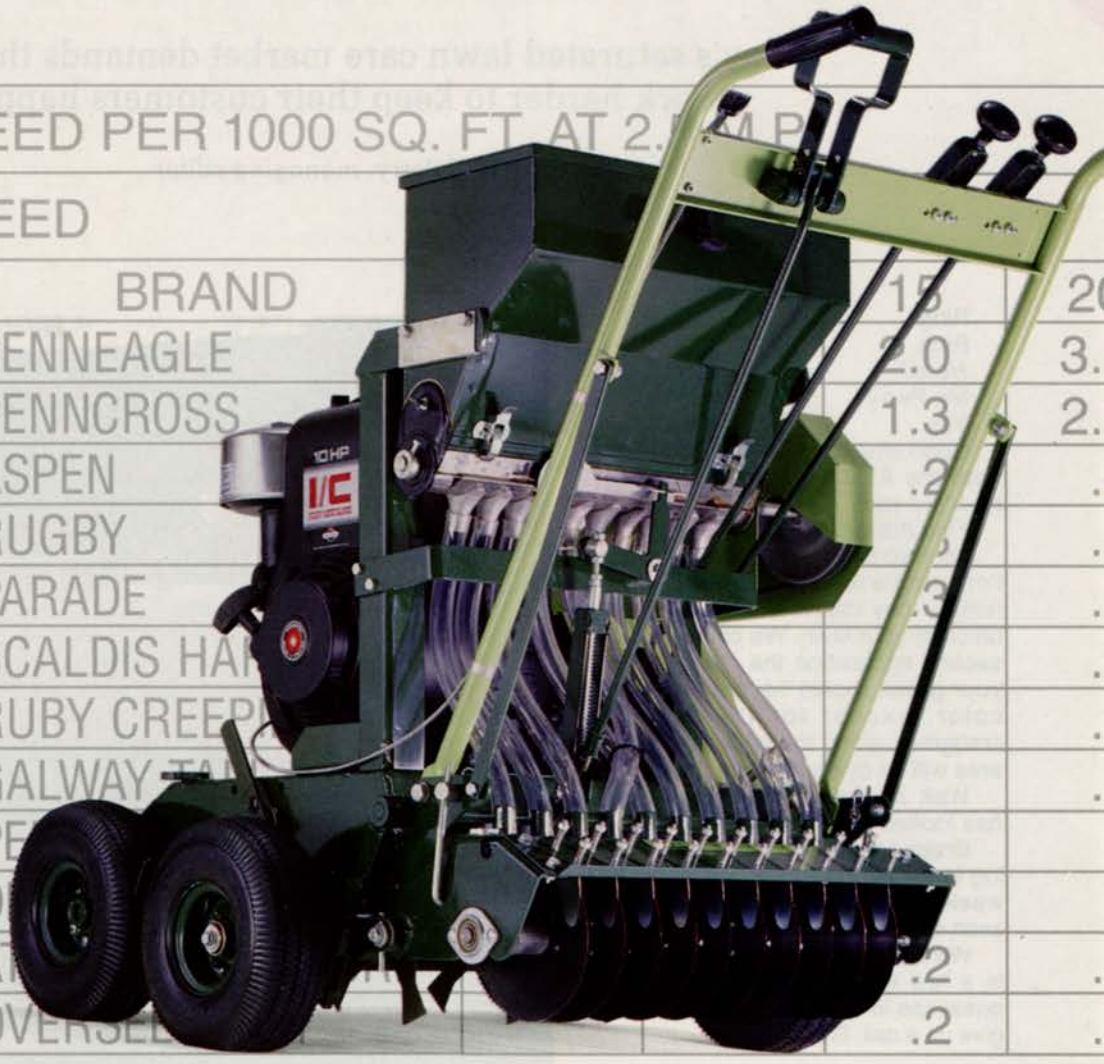

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COVER STORY

THE CUSTOMER AS KING

Today's saturated lawn care market demands that LCOs work harder to keep their customers happy.

by Will Perry, managing editor

Ring.
Ring.
Hello?
Mr. Perry?
Yes.
Good afternoon. This is John Smith from the ABC Lawn Care Company. How are you?
Fine thanks. Yourself?
I'm also fine thank you. The reason I'm calling is to check and see if you've noticed any improvement in the condition of your lawn. We completed our second application the other day and your grass should have a nice green color, except for the areas of crabgrass along the back fence. That area will be dying off about now.
Well, as a matter of fact, the lawn has looked very nice this year.
Great. I might suggest a light watering in the early evening sometime this week. It's been a while since we've seen some rain.
We'll be back to check on your lawn in a few weeks, but if you have any questions in the meantime, feel free to give us a call. Goodbye.

If you're in the lawn care business and this conversation sounds at all absurd to you, chances are good that you're getting out-hustled for customers in your market area.

Industry analysts agree that the business of lawn care in America has reached a turning point in its history. Gone are the days of the endless customer base that LCOs have enjoyed for the past 20 years. In the 1990s, profitable companies will be those that are able to retain clients through improved communication while selling them additional services.

"The issue now for lawn care companies that are going to be successful is better service," said Rudd McGary,

In the 1990s, the successful lawn care service companies will be those that remember the customer is king.

senior consultant with All-Green Management Associates in Columbus, Ohio. "The progressive companies out there have started saying to their customers 'You're the most important part of our business.' "

McGary notes that since the late 1960s, the lawn care industry has followed traditional business cycles of rapid expansion, followed by market saturation, and eventual industry consolidation, which exists currently.

Today, more than twenty years after the industry's inception, there is little variation to be found in the technical offerings of competitors, notes McGary. As a result, company that makes the special effort to attract and retain customers is likely to be more attractive—and profitable.

Tapping potential revenue

McGary's estimate of the total revenue available in the lawn care industry in this country is between $1.5 and $2 billion. Since just 1983, chemical lawn care market revenue has grown from $1.05 billion to $1.5 billion, according to industry surveys. Likewise, membership in the industry's professional organization, the Professional Lawn Care Association of America (PLCAA), has grown from 31 companies in 1979 to more than 1,200 today (which includes the loss of about 30 firms due to consolidation in 1988.) Translated, that means LCOs have reached most of the potential customers available.

To remain profitable, LCOs have recognized the need to hold on to their present customers and sell them additional services, such as mowing and management, tree care and aeration.

Russell Frith, PLCAA president, notes that the "Back to Service" theme of this month's PLCAA convention this month reflects the importance of the issue.

"In the last couple years you can see a real change in the look of the lawn care market. A huge amount of capital has been poured in and the competitive nature of the industry has increased dramatically.

"The thinking used to be that you could always go out and get a new customer if you lost one that wasn't happy. That's no longer always the case," Frith notes.

Frith's company, Lawn Doctor, has grown steadily for several years and ranks among the top revenue-earning lawn care companies in the country with annual sales of more than $31 million. The company has a policy of making sales calls to customers within 48 hours of a visit.

"Each company has to deal with the issue of customer retention in its own way," says Frith. "This is one of our ways."

Better employee training

The Davey Tree Expert Company of Kent, Ohio, with annual revenue of more than $5 million, has placed increased emphasis on customer communication in its employee training program.

"We want our people to treat each lawn as if it's the lawn of the president of the company," says Roger Funk, Ph.D., Davey's director of technical and human resources. "Then we want them to realize that it's not the president of the company that pays their salary. The average customer does."

Davey's "Customer Care" training program is a two-day affair for field employees that was conceived in 1986 and initiated this year. Its focus is to get employees to evaluate their performance through the eyes of the customer.

Davey's field employees are encouraged to attempt to talk directly with customers at the time of service. If no one is home, personalized literature is left at the door, including a stamped survey card. Also, employees are to check the environment for possible areas of complaint.

Funk adds that a toll-free number

for customers is also under consideration.

"As we looked back on 75 years as a company, we found that customer care was indeed the direction we should be headed in," says Funk. The company is currently designing an "Employee Care" program for its management personnel. It will be designed to attract, train and develop the type of caring employees it desires.

"After all," says Funk, "you can't have one without the other."

Mike Turner, operator of Cleveland-based Custom Lawns, uses a quarterly newsletter featuring articles on varied topics such as gardening and mower maintenance in addition to post-application telephone service calls. In addition, since a vast majority of his customers are within 20 to 30 miles of the home office, his employees will stop to evaluate the lawn condition of nearby customers while on the road. They always leave at least a personalized note behind that lets the customer know they were there.

These free visits cost Turner about 10 man-hours a week and have become an effective public relations tool.

"What we're doing now is going out between applications and taking a look around. We're making decisions about the success of the materials we're working with, trying to spot potential problems and offering additional services or suggestions. The company that doesn't go out and do these things is the one that's going to be in trouble."

Consultant Larry Kokkelenberg says that treating a customer well is the most important element in a service-oriented business.

Ignorance is expensive

In addition to a rising or falling revenue and customer base, there are other factors to consider when evaluating your relationship with your customers. Specifically, it's important to read into those numbers for a more complete picture of where your company may be headed, says industry consultant Larry Kokkelenberg.

Kokkelenberg is president of the Center for Business Development, a consulting firm that has worked with LCOs for more than seven years. He believes that a company's attitude toward its customers is the single most important factor in the success of a service-oriented business.

Kokkelenberg notes that for every customer complaint you receive there are 26 other customers with the same complaint you won't hear from. Sixty-five to 95 percent of those will not do business with you again. Also, the person with a complaint is likely to tell nine or 10 others of their misfortune, while 13 percent of those will tell more than 20 people. However, 95 percent of customer complaints can be rectified if you act quickly and courteously.

A competitive lawncare company today can no longer tolerate an average annual customer turnover rate between 16 and 22 percent, he says.

"There is greater awareness today that it's a lot more expensive to gain new customers than to retain the ones you have," concludes Kokkelenberg. **LM**

'IT WORKS FOR ME'

When Senske Lawn and Tree Care reached a slow growth period three years ago, owner Chris Senske gave it a booster shot by increasing emphasis on communicating with the customer. Today he operates three branches in Washington, enjoys an annual growth rate of 30 percent and revenue of more than $2.5 million.

"We had reached a plateau," notes Senske. "I wasn't happy with how the company was going and felt there was something we needed to do to make a change."

Senske hired a consulting firm to coordinate a two-day training seminar that is taken by all his field service representatives prior to the spring season. "The major thrust of it is to train them to be confident in their abilities to communicate with the customer," says Senske. His employees learn the reasons why people want a lawn care service, what customers want to hear, how to use the proper tone of voice in conversation and how to give a firm handshake, among other things.

"For the new employee, this seminar is awesome," says Senske. "They think, 'Oh my god, this really is a profesional organization.' For the returning employee it's a good refresher course that reminds them who pays their salary."

In addition, Senske has 16 employees manning the telephones to drum up new business and contact present customers four to six weeks after their second or third application. "We're calling to see if we can get them to complain before they complain," explains Senske. He says that about 10 percent of his customers have concerns that require attention.

These steps are part of a whole package of things designed to improve the company's image in the eyes of its customers, Senske says. How an employee answers or speaks on the phone, how easy it is for the customer to understand and pay their bill, and providing sufficient notification of when you have or will visit a customer's home are all examples of everyday business aspects that can be used to your advantage. *—Will Perry*

Chris Senske

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John Nugent, Lawn Medic, Inc., Bergen, NY

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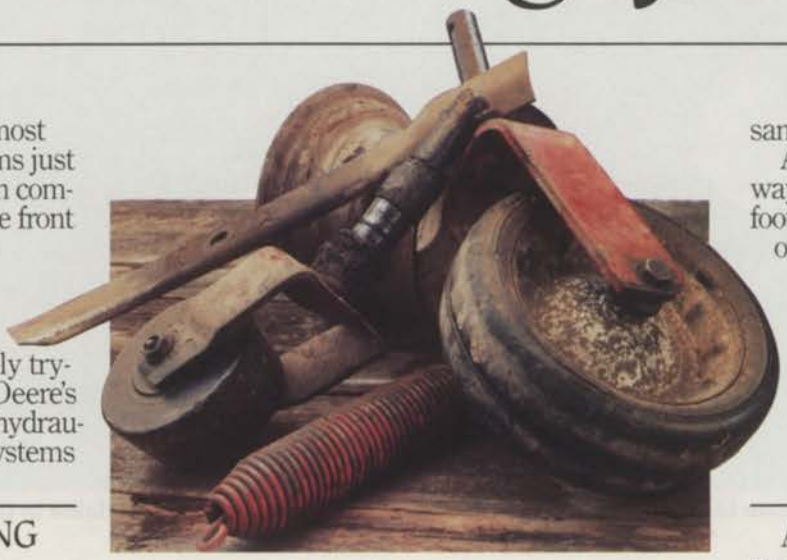

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Springs are the key components in many weight transfer systems.

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That's also what happens when you put springs on a mower deck. A side effect that's damaging to both deck components and quality of cut. John Deere's weight transfer system is better. Here, your mower deck doesn't bounce because there are no springs. Weight is hydraulically transferred to the drive wheels by simply turning a knob on the right console.

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The increasing customer base for utility tractors means more attachments will be available in the coming years.

COMPACT TRACTORS HELP REDUCE COSTS

The versatility and flexibility of compact tractors make them ideal for budget-minded landscape managers.

by Ken Moehle

Increasing numbers of landscaping and maintenance operations are finding compact utility tractors in the 18 to 35 horsepower range valuable additions to their mix of equipment. One key reason is the ability of compact tractors to provide added versatility and flexibility.

Like mid-sized utility tractors, compact tractors can operate an ever-increasing list of attachments that mechanize hundreds of grounds care tasks.

Landscapers often purchase compact tractors because the versatile machines fit tight quarters and give more workers a productive, multi-purpose machine. However, once the tractors are in service, grounds care supervisors discover that compact tractors can simplify equipment management, control operating cost and reduce lifetime ownership costs.

Ken Moehle is product manager with Tractors Case IH, Racine, Wisc.

Operation and maintenance

When compared to selecting single-purpose machines and maintaining an equipment fleet with diverse sizes and types of engines, compact tractors can help simplify servicing, repairs and managing supplies by:

- reducing the need to lease or buy and maintain a large inventory of single-purpose, self-powered machines;
- reducing the numbers of engine types and sizes to fuel, lubricate, service and maintain;
- improving the fuel efficiency of modern diesel engines in compact tractors, which compare favorably with the efficiency of smaller engines in single-purpose equipment;
- servicing skills, experience and tools are virtually identical to those for servicing mid-sized tractors, loader/backhoes, skid-steer loaders and similar diesel-powered equipment;
- the fact that many compact tractors are supported by large dealer networks servicing and selling other utility, construction and agricultural equipment;
- the likliehood that fuels, oils and hydraulic/transmission fluids are the same as those required by mid-sized tractors, loader/backhoes and other

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An example of vehicle flexibility is Kubota Tractor Corporation's R400, which is suitable for both commercial and industrial use.

equipment commonly found in grounds-care fleets;

- the engineering of engine, hydraulics, hitch and PTO, which are built to accommodate a wide range of demanding applications. Therefore, these components have longer life than similar components on many single-purpose machines, and
- longer service life, which reduces total operating costs of compact tractor systems which compare favorably with costs of single-purpose machines.

Resale and trade-in value

Not only is the cost of a compact tractor system amortized over a greater period due to its longer service life, but at the end of its service life, the compact tractor is typically worth far more than the single-purpose machines it replaces. It is not uncommon for small tractors that are decades old and properly maintained to sell for more than their original purchase price.

The many markets for compact tractors, including agriculture, industry, homeowners and contractors, make them valuable items in all regions. When the high resale value of the compact tractor is taken into account, the lifetime cost of choosing the compact tractor system for landscape management work becomes extremely competitive with the lifetime costs of single-purpose mowers, snow removal machines and other equipment choices.

Compact tractors are now a well-established part of the equipment marketplace. The large customer base means the choice of attachments to purchase or rent will continue to increase and future parts and service availability is assured. These conditions allow the landscape manager to be confident that purchasing or leasing compact tractors is economical as well as productive and efficient. **LM**

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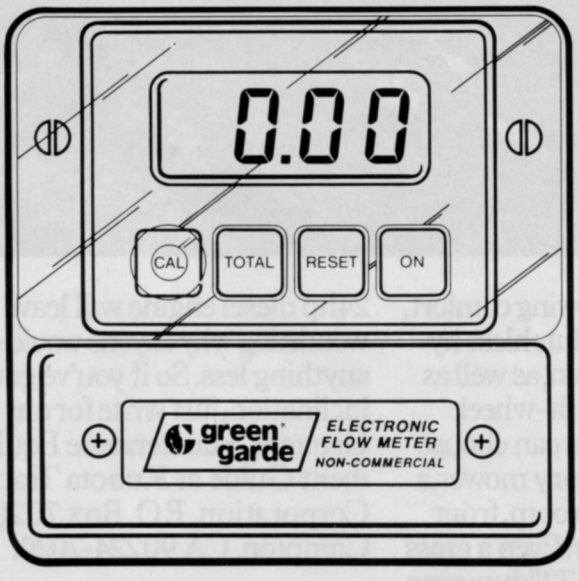

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For The Hardest-Working Vibratory Plow Made . . .

See the Plow People at Ditch Witch®

To put cable or pipe in the ground without digging trench, there's one *best* source for equipment that can get the job done right... Ditch Witch. You can find more plow models in more different sizes at Ditch Witch, and they outperform all other brands. Here's why:

More Force To Do More Work

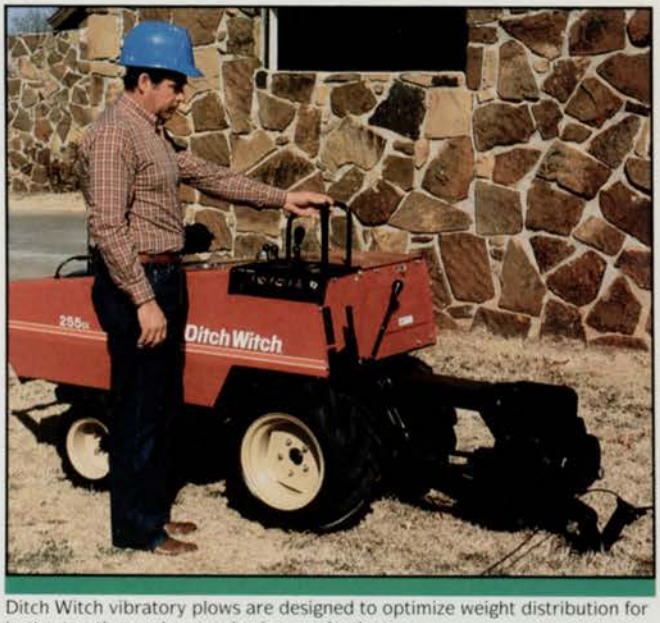
Ditch Witch plows get more work done. The dry vibrator design of Ditch Witch plows

The Ditch Witch model 6510 equipped with the exclusive fiber optics cable handling system.

develops more breakout force than oil bath vibrators, because the weights don't turn in oil. That means available horsepower isn't wasted. The Ditch Witch dry vibrator won't overheat, and that's important when the going is tough.

Effective Weight Transfer

Ditch Witch uses the earth's natural resistance to the plow blade to increase plowing efficiency. Nonparallel plow linkage transfers the force of this resistance to the front wheels, giving a Ditch Witch plow the traction and pulling power of a machine that weighs as much as 50 percent more. That means you can work effectively in tough conditions where other brands have trouble.



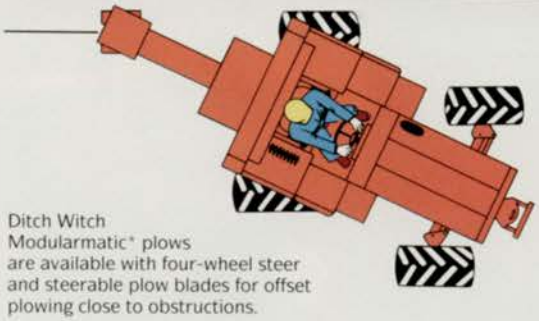
Ditch Witch vibratory plows are designed to optimize weight distribution for better traction and more plowing production.

Built to Last

The Ditch Witch unitrolly plow frame has the structural strength to hold up under the extreme forces developed during plowing—even in difficult conditions. The frame and vibrator are one piece, so they can't come unbolted from each other.

Offset Plowing

Plowing-in cable along a road or next to an obstruction can be done by offsetting a Ditch Witch plow. Effective offset plowing is possible because of independent four-wheel steering and rigid one-piece frame. The



Ditch Witch Modularmatic® plows are available with four-wheel steer and steerable plow blades for offset plowing close to obstructions.

combination of crab steer configuration and offset blade allows the wheels and blade to travel in the same direction, while the rigid frame holds everything in position. Only Ditch Witch has plows with offset capability in compact units down to the 35-HP-class.

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Feed blades for cable, pull blades for pipe. Blades with the bend radius to safely accommodate television and fiber optic cable. Ditch Witch has the right blade for every job. Edge Series blades are the most durable you can buy and have special features for protecting cable.

The compact Ditch Witch model 350sx is ideal for plowing in plastic pipe, as well as cable.

Versatility

Ditch Witch builds plows from 10-HP-class through 100-HP-class for bringing service from the street to the house, or for making installations from town to town. Power and communications cable installations, residential and commercial sprinkler systems, natural gas and water distribution lines—these jobs and more are being done every day with Ditch Witch vibratory plows. Ditch Witch designed and introduced the first system for safely handling fiber optic cable during plowing. As new technology develops, you can be sure Ditch Witch will have the equipment ready.

A wide range of modules and accessories make Ditch Witch plows even more versatile.

Equipment Made for People.

The needs of the operator are a key element in the design of every Ditch Witch plow. The operator's station allows good visibility. Gauges and controls are easy to see and use. Ditch Witch even thinks there's nothing wrong with allowing the operator to work in relative comfort. A comfortable operator can be a more productive operator.

Dealer Know-How

No one knows more about vibratory plowing than your Ditch Witch dealer, and he's ready to share what he knows. That's why many people believe the Ditch Witch dealer is the best reason for using Ditch Witch vibratory plows. Underground construction isn't a sideline for him. He knows his product line and the conditions in your area. He has a staff of experts committed to keeping your equipment on the job. He also stocks a complete parts inventory.

Ditch Witch is Best!

The best-designed vibratory plows available. The most versatile, widest selection of models available. Equipment backed by a knowledgeable dealer organization. No wonder more people are using Ditch Witch vibratory plows than any other brand!

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For the name and location of the Ditch Witch dealer servicing your area, call (800) 654-6481.

Circle Reader Service # 125.

PLZ1

NAILING THE CULPRIT

With an efficient equipment tracking system, those lost and broken hand tools swiftly become a thing of the past.

by Jay Holtzman, contributing editor

Even the smallest landscape company or golf course can easily have tens of thousands of dollars tied up in equipment.

Because of this, virtually all landscape managers and golf course superintendents must come up with a system to track the use—and sometimes abuse—of their equipment.

Beyond being able to accurately track daily use of equipment, such equipment control systems can range from simple to elaborate, from informal to rigidly structured.

Keeping it simple

An informal system works best for The Caretakers of Egan, Minn. According to president Thomas Mann, "We don't have a lot of crews running in all directions, nor do we have the variety of equipment some contractors have." That's because of the size and nature of the business: specialization in maintenance of commercial and industrial properties with no design work.

Yet even with a fairly specialized business, Mann has more than $150,000 worth of equipment, including a variety of front-mount and belly-mount equipment, walk-behind mowers, various hand tools and small power tools such as chain saws and aerators.

"Each mowing crew has a base line of equipment that it needs every day, and every truck has a complete set of that equipment," Mann says. "The crews get their mowers and tractors for the day each morning and they must return them each evening, but there is no formal check-out system. We're small enough that abuse or loss of the equipment isn't a problem for us. We've talked about putting in a more formal system, but we just haven't gotten around to it."

Informal ways to track equipment, however, work well for him.

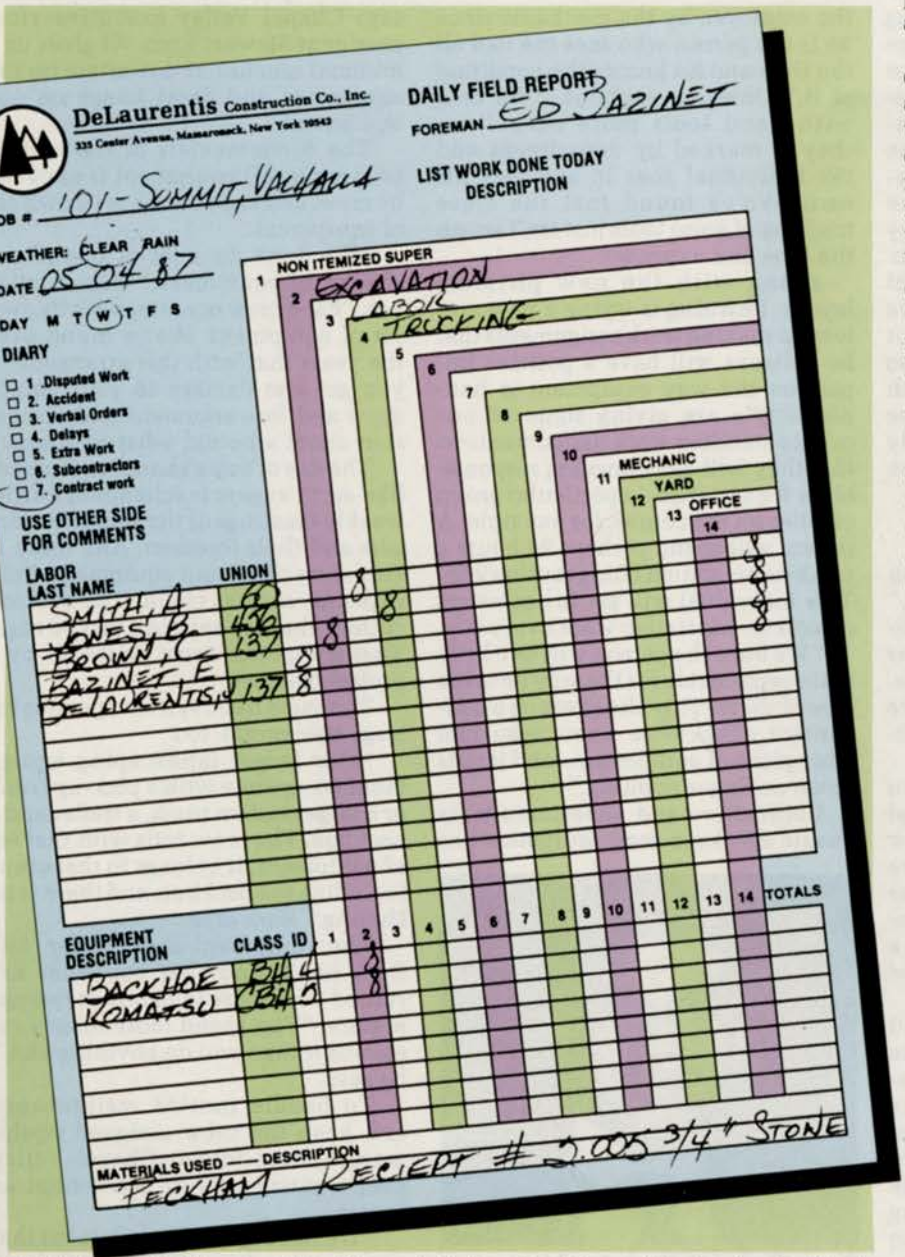
"One of the things we did to quickly check for missing equipment was to install tool racks on the back of each truck for the shovels, rakes and so on, so that with a quick glance you can see if the truck is fully equipped with the tools they need to lug around every day," Mann explains. "But for the most part, we have steady long-term employees, so we haven't had a problem with theft or equipment abuse."

Getting sophisticated

Even large, sophisticated tracking systems such as the one operated by DeLaurentis Construction of Mamaroneck, NY, still depend to some degree on the cooperation and goodwill of employees.

"We have a lot of people who have been with us for a long time—they're like family—and they look out for our interests," says Mary DeLaurentis.

Every piece of equipment has a use file, she explains: when in use, for how long, all maintenance and repairs. "All equipment appears on an equipment list with a code number for each piece. The code number is also inscribed on the tool, and this number is recorded each day that a tool is used. A daily charge is made at a specific hourly rate to every job for each



At DeLaurentis Construction Co., a daily log sheet is used to track what tools are signed out to whom each day. That employee is responsible for returning it in good condition.

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piece of equipment used on that job."

A fleet manager is responsible for the more than 40 pieces of large equipment the company operates. Another manager is responsible for the daily assignment of smaller power equipment (up to and including equipment the size of backhoes) and hand tools.

Tools are signed out each day to an individual who is responsible for that tool and responsible for returning it in good condition at the end of the day. For convenience and efficiency, small tools are kept in trailers at various job sites, but the individual is still responsible for them. Drivers are responsible for all the equipment on their trucks.

This careful paperwork system is backed up by monthly meetings with employees.

"Every month, we have a meeting of all the people who take out equipment. We review what has gone on during the previous month and discuss any cases of misuse or vandalism," DeLaurentis explains. "The bottom line is that we are a family-operated company and everyone knows that if there is a problem they will have to answer to the main man.

"Pilferage or misuse of equipment was a problem years ago when we were smaller and growing. We got notes from employees that so-and-so had built a house on our time and with our materials. But that isn't the case any more. With our system and family operation of the business, we have good control of it now."

Avoiding congestion

"The tool thing can get away from you quickly if you don't have control," says Kevin Downing, development director of Willoughby Golf Club, a new 18-hole residential club in Stuart, Fla. "In this new development, we have gone to a tighter system for better control.

"Before coming here, I sat down with my assistant and we looked at what we were doing and asked how we could do it better. Any problem we had with equipment was with smaller items worth $300 or less—string trimmers, that type of thing. So we put in a new tool system here and designed the building to accommodate it."

Storage areas for power tools and hand tools are at opposite ends of the new building. "We have a line of demarcation between where someone goes to pick up a power tool and where he goes to pick up a hand tool," Downing says. This cuts congestion in the morning when crews are drawing their equipment for the day and also reduces the opportunities for workers to loiter where tools are kept.

"All power tools are checked out to the employee by the mechanic since he is the person who sees the tool all the time and he knows the condition of it," Downing explains. "We deal with hand tools more casually—they're marked by department and the individual goes in and gets his own. We've found that the close tracking of hand tools just isn't worth the time and expense."

Mann: His smaller company uses an informal system to track equipment use and performance.

Along with the new physical layout, Downing is trying a new system for making work assignments that he believes will have a positive impact on the way equipment is handled. "We are giving some of our people standing work assignments so that they will have ongoing responsibility for a 'station,' a particular group of holes on the course, for example. A person will spend perhaps 24 hours a week on his station doing routine jobs. This individual will get the same set of tools for his station work every day.

"We hope the person will be a little more responsible for the way he takes care of them. This also gives us a convenient check—we know who had what piece of equipment—and it cuts down on finger pointing."

Contractors and superintendents should also keep good equipment use records for their own protection in case of lawsuits, Downing points out.

"You need some kind of system so that if an employee or former employee comes back and sues the company because he claims he was injured while using a particular piece of equipment, you can look back at your records and see, in fact, what that person was working with," says Downing.

Rom: Chapel Valley's tracking system includes a bonus program tied into equipment condition.

Color-coding tools

Probably the most effective system is one that combines firm control of equipment with strong employee motivation. Like the system at Chapel Valley Landscape of Woodbine, Md.

"We put a lot of effort into our system and spend a lot of money on it," says Chapel Valley executive vice-president Stewart Rom. "It gives us a minimal amount of downtime on the equipment and great image on our equipment."

The fundamentals of the system are simple: all equipment is assigned by crew, and each crew has its own set of equipment.

"We don't do a lot of in-and-out sharing of equipment," Rom continues. "Each crew operates with its own set of equipment. We've found over the years that with this arrangement you get less damage to your equipment and less argument and discussion about who did what to whom."

The use of some shared equipment like earth augers is scheduled during weekly meetings of the project managers and their foremen. And there is also some check-out equipment, Rom explains, such as chain saws and sod cutters, that are kept in a locked cage. That equipment must be issued by a project manager.

The same basic system operates for large equipment, too.

"Our larger landscaping equipment we operate with a pick-up truck or a large tandem truck, a trailer and a backhoe. The crew rolls with that set of equipment, it belongs to that crew, including the backhoe, and there is no sharing," Rom says.

The equipment lasts longer, too. Rom has found that backhoes are ruined with more than one or two operators. "You spend more money repairing it than you do anything else," he says.

To handle routine maintenance and keep the crew-assigned equipment system intact, Chapel Valley keeps entire sets of equipment as spares.

"We have rotation equipment that a crew uses when we service their rig for preventive maintenance purposes. They trade off the whole rig, leaving

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Double-wall cargo bed	Standard	Optional	Standard	Standard	Standard
Tinted glass	Standard	Optional	N/A	N/A	Optional
Steel-belted radials	Standard	Optional	Standard	Standard	Standard
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their trailer and taking ours with all the spare equipment," Rom says.

And to keep track of equipment belonging to each crew, all equipment and trucks are color-coded so that every piece of equipment has a permanent home on a given truck.

"The company is divided into departments and branches," Rom explains. "Each branch has a color assigned to it, and every tool in the branch has a color stripe of that color. Then each truck within the branch has a second color assigned to it, and every tool on that truck also carries a stripe of that color. One color band is two inches wide and the other is one inch wide." Tools are painted in the same colors as the truck to which they are assigned. Finally, a complete list of the tools assigned to that truck is mounted on the truck's side and covered with plastic as a permanent record of that truck's tool inventory.

Inventory at Chapel Valley is taken quarterly, during which time everyone must account for their tools.

"If you need a replacement for a tool due to wear and tear, you return the old tool to our internal company store and we issue a new tool. If you've lost a tool, we fill out a sheet that records that fact, issue a new tool, and charge the crew for it from an accounting point of view," Rom continues. (Crews are not directly charged for such tools.)

The whole record-keeping system gets strong suport from a bonus system that rewards those crews that have taken good care of their tools.

Says Rom: "We tally what tools a crew has lost during the year, and this effects the bonus that each member receives." A perfect record earns 100 percent of the bonus; lost tools cause a reduction of the bonus.

Most recently, the company has begun putting the name of the foreman on the side of his truck to add a further note of identity between man and equipment, and to instill even more pride.

A sense of pride

Rick Haas, course superintendent at Corpus Christi (Texas) Country Club believes that it is an employee's pride in his work and a feeling of responsibility that is the key element in assuring good equipment treatment.

"It's the mechanic's job when a mower comes back to check that the oil is right and that is has been greased properly and that sort of thing, and to go ahead and do those things if they haven't been done," Haas says. "Then it is also the responsibility of the employee who will be using the equipment the next day to run through the same set of checks again before he uses it. That way, we are checking it two or three times before it is used."

But the real key is "that they want to feel like they are important and appreciated and that it is important to do their job right," Haas continues. "You've got to give them responsibility and work with them, and it takes some time."

Haas uses a big scheduling board in the employee lunchroom to keep employees informed about the jobs they'll be doing.

"I try to get them involved by showing them what has to be done for the whole month and what equipment we will be using. This way, they begin to feel like they are involved in the overall performance of the golf course. I also explain to them that if we can keep our overall costs down, it will mean more for them—a better raise at the end of the year.

"Overall, if you get the respect of your employees and you respect them one-on-one, they are going to treat your equipment with respect, too." **LM**

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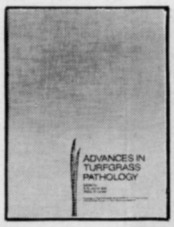

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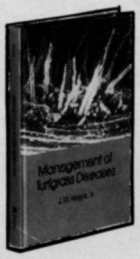

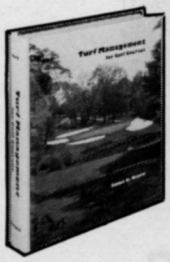

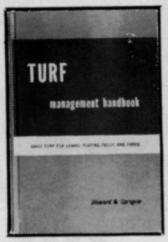

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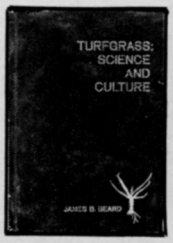

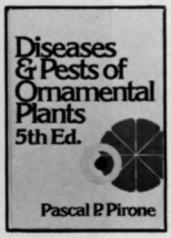

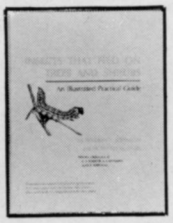

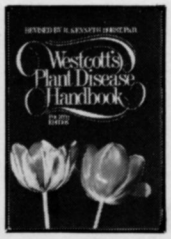

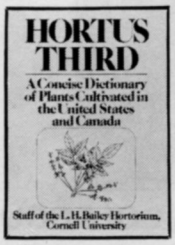

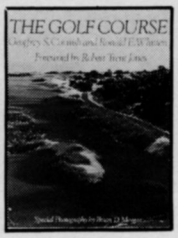

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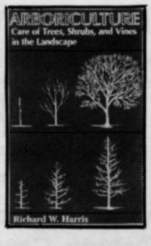

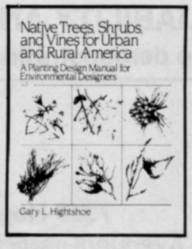

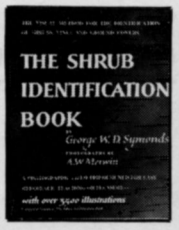

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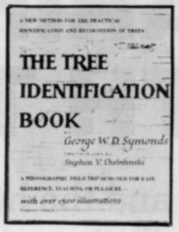

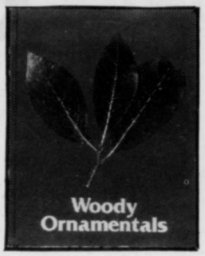

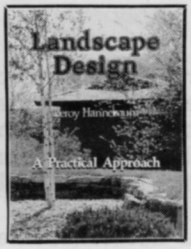

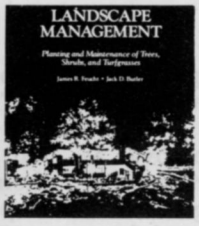

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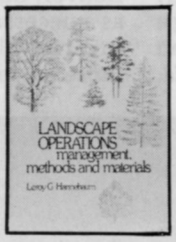

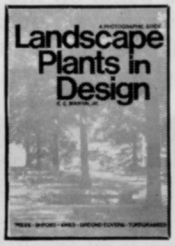

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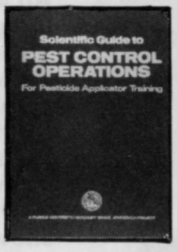

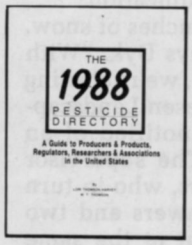

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CLEARING PROFITS WITH THE SNOW

The work is difficult and the hours long, but landscapers are making the necessary efforts—and money—from snow removal.

by Jerry Roche, editor

Snow removal is not an art or a science. Rather, it is a lot of both.

"It is an expensive business, but money can be made, given the right set of circumstances," says Thomas Mann of The Caretakers, Eagan, Minn.

Mann, Bill Peterson and Eldon Dyk were members of a panel on the art and science of snow removal during a recent meeting of the Associated Landscape Contractors of America. They offered a series of tips on how their businesses make snow removal more profitable.

"We refer to snow removal as 'blood money,' " says Peterson of DuBrow's Nurseries, Livingston, N.J. "They're days of hard work and sleepless nights."

Dyk, of Allen Keesen Landscape, Denver, Colo., refers to the winter job as a necessary evil. "There are profits involved, but so are liabilities. For those reasons, we only remove snow for our regular landscape customers."

The major liability is taking a plow into an obstacle hidden by the snowfall. That's why Keesen drivers visit their sites in early October for a visual inspection.

The Caretakers keeps a "Plow Book" for drivers. The book contains a schematic for each job and special notes on high priority areas, where to dump the snow and phone numbers for emergencies. Mann says it's a three-ring binder with an acetate cover that works well. "Drivers *must* know all jobs," continues Mann.

And "corners, drains and fire hydrants *must* be marked beforehand," Peterson adds.

DuBrow's subcontracts most work to 22 subcontractors who use 40 pieces of equipment. DuBrow's maintains 22 pieces of equipment for its own use, including four-wheel-drive pick-up trucks with eight-foot plows, two-wheel-drive dump trucks with eight-foot plows and other trucks with 10-foot plows. "We also have Case W14s and W20s with two-yard buckets that can pile snow very high. We use those in community parking lots," says Peterson.

An eye on the storm

To get one step ahead of the game, Mann's company monitors local television broadcasts and regularly communicates with the National Weather Service. Most of the company's plowing is done at night, when the heaviest snow seems to fall.

Other problems associated with snow plowing, the trio notes, are scheduling and communication.

"With one to four inches of snow, we start at 4 a.m.," says Dyk. "With more than four inches, we're starting around 2 a.m." At Keesen Landscaping, supervisors are notified of an overnight snowfall. The supervisor then calls plow drivers, who in turn call their crews. "Plowers and two shovelers are sent out at the same time. Each driver has a regular route.

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In case of emergency, a mechanic becomes available at 6 a.m.," Dyk says.

Mann says The Caretakers tries to plow in two stages. The first stage is the "open-up" stage which is completed by 7 a.m. so employees of commercial clients can get in and out of parking lots first thing in the morning. The second state is the "complete" stage, which is full cleaning of the lots.

"Communication is very important with commercial customers because everyone wants to open up at 7 a.m.," Mann says.

The three contractors seemed to agree that the maximum length of snow plowing shifts is eight to 10 hours, for safety's sake. Crews out longer might suffer from fatigue and therefore might not exercise safe judgment.

DuBrow's sets up its entire snow plowing unit to handle up to 25-inch blizzards.

Mann has found 7½- to 8-foot plows to work best. And each of the trucks is equipped with a double battery system to cope with the sometimes frigid Minnesota winters.

Many companies like DuBrow's hire part-timers just to work snow shifts. DuBrow's, according to Peterson, usually hires 40 extra people just to shovel, most from the unemployment lines.

How to pay the help? Mann has a standard rate for up to six inches of snow; for six to 10 inches, the standard rate is doubled; for 10 to 14 inches, the standard rate is tripled. For more than 14 inches of snow, Mann pays employees by the hour.

To insure his financial stability, Mann also uses what he calls a "no-snow" contract. That is, if it doesn't snow through the winter, his company still gets a standard minimum retainer for being available.

"It pays to have a variety of types of contracts," notes Mann. "There are 10 different ways to set up a contract. There's a monthly rate as soon as the snow comes, a yearly rate, a yearly rate with minimum, an hourly rate and so on."

Sand, salt and calcium chloride are the most common materials to melt ice and snow on sidewalks. Mann, for instance, charges $165 an hour for salt and sand applications.

Is snow removal "blood money," then? Judging by the panel of ALCA experts, maybe. But it's green, and it *is* money. **LM**

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B. Paid and/or Request Circulation		
1. Sales through dealers and carriers, street vendors	None	None
2. Mail Subscriptions	48,202	48,145
C. Total Paid and/or Requested Circulation	48,202	48,145
D. Free Distribution by Mail, Carrier, or Other Means, Samples	1,861	1,763
E. Total Distribution	50,063	49,908
F. Copies not Distributed:		
1. Office use, left over, unaccounted, spoiled	712	915
2. Returns from news agents	None	None
G. Total	50,775	50,823

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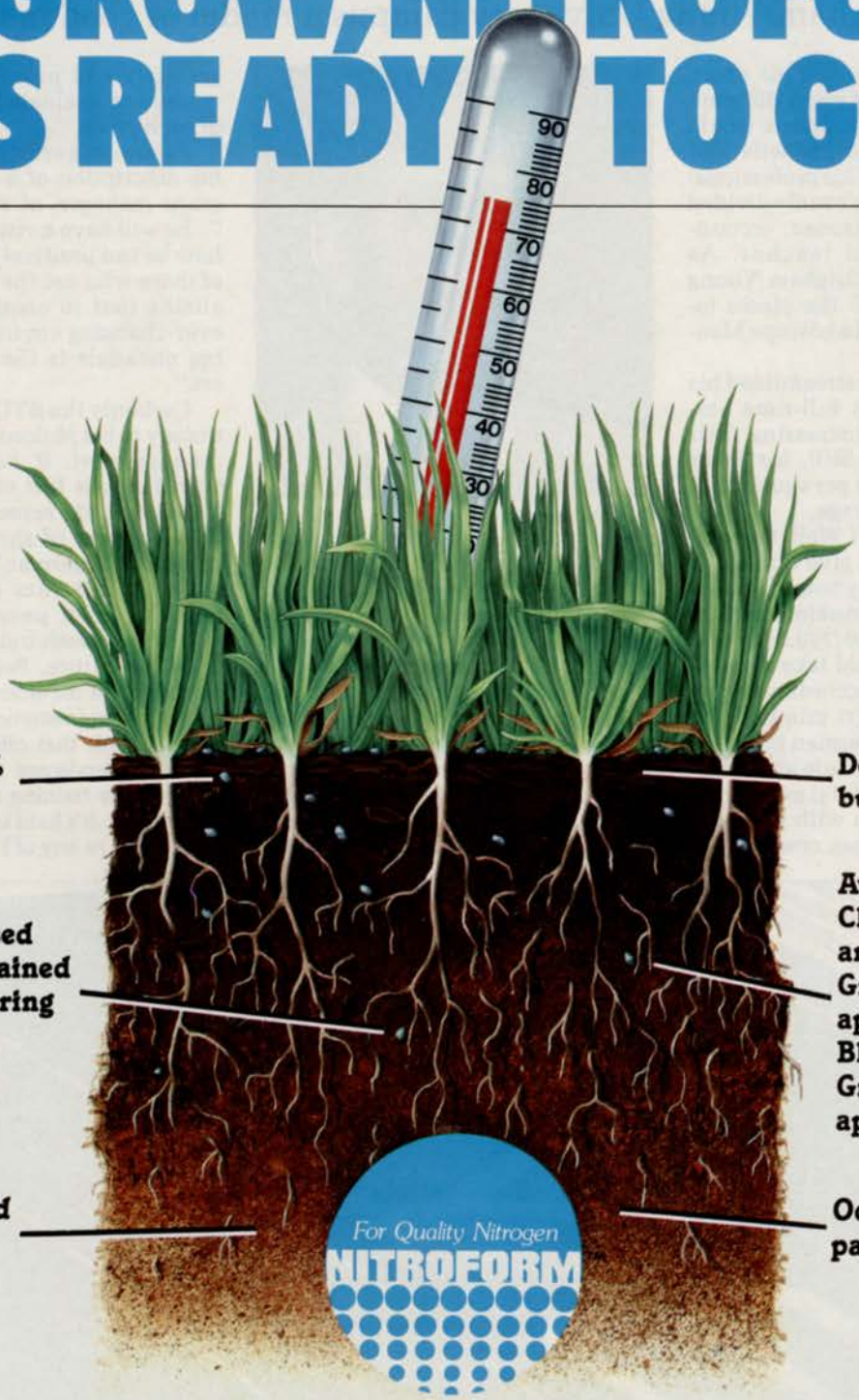

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LANDSCAPE MANAGER OF THE YEAR

By getting the most out of his personnel and equipment, Roy Peterman made the Brigham Young University campus a model of good management.

If Roy Peterman were a pie chart, he'd be made up of many different pieces. The biggest pieces would show his devotion to his wife and seven children, while his professional pieces would be pretty evenly divided between manager, planner, accountant, evaluator and teacher. As grounds manager at Brigham Young University, he put all the pieces together to become our Landscape Manager of the Year.

In five years he has streamlined his organization from 56 full-time employees to 38 while increasing their workload one-third. Still, his labor costs are ½ a cent less per square foot than the national average.

Still not impressed? Well, the next time you're in Provo, give him a call and ask him how many hours his people spent repairing sprinkler heads in the first quarter of 1988 (798.5) or how many minutes it should take to cultivate around a tree according to his time/motion survey (11 minutes). By pinpointing costs, Peterman has been able to effectively schedule and monitor the more than 300 total employees under his supervision with great detail. In addition, he has created *The Five M's Physical Plant Resource Model*, which defines the responsibilities and accountability of all employees, from director to worker, within the department.

Roy Peterman

A *Capital Needs Analysis Equipment Replacement and Renewal List* is also in place that tells department heads what equipmemnt is on hand, when it was purchased, what it cost and its life cycle. The system helps Peterman set up his equipment budget early and provides an excellent method to evaluate the performance of each piece.

Peterman's artistry can befound in his description of a successful landscape manager, of which he writes: "...he will have a vision of our age and how he can positively enrich the lives of those who use the landscape by realizing that to create an attractive, ever-changing environment from living materials is the highest form of art."

Certainly the BYU campus is a testimony to his philosophy of landscape management. It hosts more than 50,000 square feet of flower gardens, 8,608 trees, 355 acres of turf and more than 40 acres of shrubs that are designed, in Peterman's words, "to ensure an optimum atmosphere for learning with peace and serenity available to each individual."

In the future, Peterman hopes to complete the requirements for a physical plant administration degree at BYU, write a book that offers a holistic approach to landscape management and improve the training capabilities of his department. It's hard to imagine him not succeeding in any of those endeavors.

Brigham Young University's sports fields undergo a six week renovation period where they're thatched, aerated, topdressed, overseeded, rolled and fertilized.

More than 240,000 flowers, which guests are allowed to pick, are planted at the Arizona Biltmore each year.

Biltmore, Holy Cross make it close

According to judges of the 1988 Landscape Manager of the Year award, Roy Peterman at Brigham Young University had excellent competition for the title. Named honorable mention, not far behind Peterman, were a pair of aspiring writers, Thomas Harrow at the Arizona Biltmore Hotel and James Long at Holy Cross College.

Harrow, when not overseeing the planting of 240,000 flowers each year, is otherwise busy publishing a book entitled "Five Star Gardening: Back to Basics in the Southwest." And one of Long's immediate goals is to write a handbook and resource guide for landscape managers.

The Arizona Biltmore, a Westin hotel, is renovated twice a year, according to Harrow. This includes planting 28 varieties of flowers and 5,000 bulbs, and scalping, thatching and overseeding all 11 acres of turf with 14,000 pounds of grass seed. The Biltmore is one of the few hotels in the nation where guests are encouraged to pick the flowers.

What was once a landfill is now the popular Paradise Garden planted with roses, trees, bushes, flowers and a special cactus garden that features 14 cacti native to Arizona and six Australian drought-resistant plants.

Long and Holy Cross were most recently honored by the Sports Turf Manager's Association for having the "Baseball Diamond of the Year."

Fitton Field, one of New England's landmark athletic facilities, has been the host to such standouts as Casey Stengel, Babe Ruth and Jimmy Foxx. During the 1920s, 1930s and 1940s, Fitton Field was the site of annual exhibition games pitting the Boston Red Sox and Boston Braves against Holy Cross.

Another highlight of the Holy Cross campus is the arboretum where the Teddy Roosevelt Tree is located. The former president planted the Scotch elm himself in 1905 following commencement. It is joined by thousands of evergreens, birches and flowering crabs on campus.

The contest was jointly sponsored by LANDSCAPE MANAGEMENT magazine and the Professional Grounds Management Society. □

Fitton Field at Holy Cross, where Babe Ruth once played, is one of the nation's best-kept baseball fields.

'LOVE THAT DIRTY WATER...'

Improvements in treatment have made reclaimed wastewater a viable source of irrigation water, and a way to conserve valuable freshwater supplies.

The lyrics "Well I love that dirty water..." from the Standells' 1966 hit song "Dirty Water" were 20 years ahead of their time. More than a few landscape and turfgrass managers will be singing it soon.

The use of dirty water, commonly known as effluent or recycled water, is a growing trend in a country that is wasting water resources at an alarming rate.

The use of recycled water is not a new concept, but only in the last five or 10 years, with the advancement of waste treatment technology has its widespread use gone beyond discussion and into common practice.

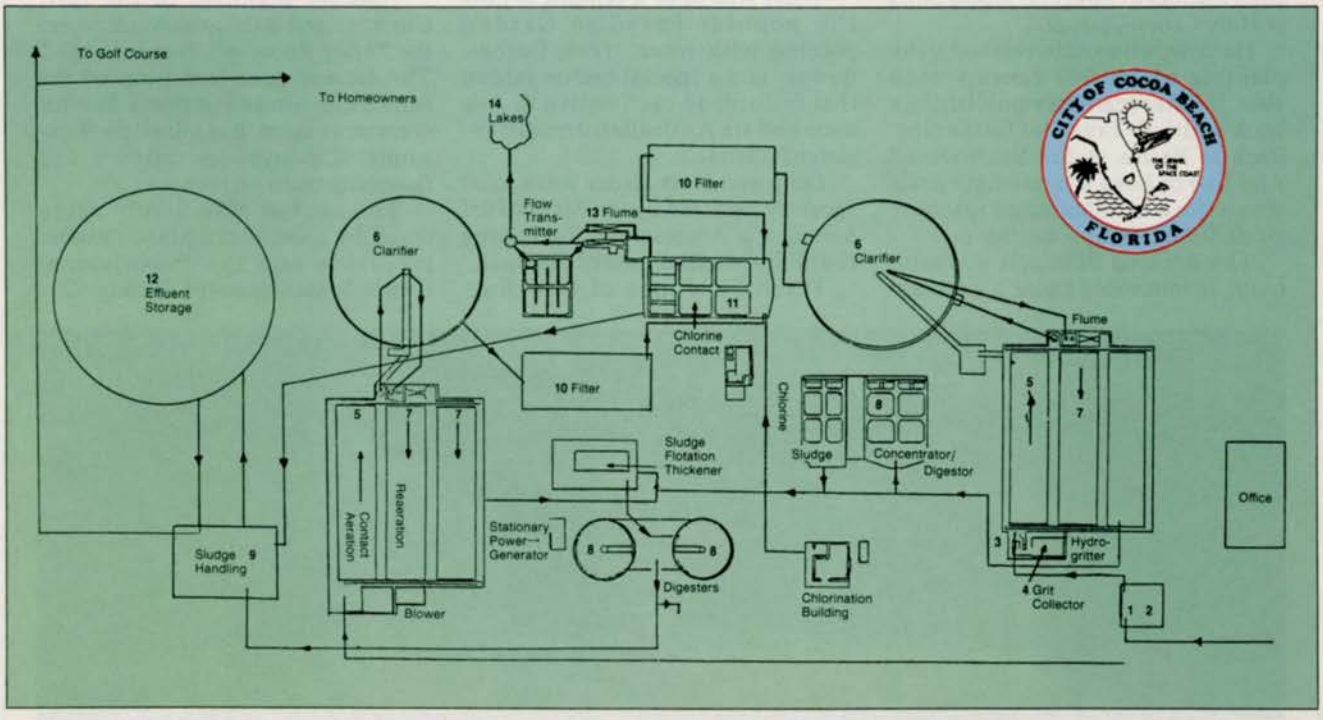
For now, its use is mostly on golf courses, though effluent use is spreading to parks and residential landscapes as water supplies become more scarce.

According to Toro vice president James R. Watson, Ph.D., 10 years ago about 70 to 75 golf courses in the entire country were using effluent irrigation. In California alone, notes Roger Lindholm of the California Department of Water Resources, at least that many courses were using effluent by 1985.

Water re-use in Florida is equally extensive. The 160 wastewater recycling projects in the state have a capacity to pump 380 million gallons per day (mgd). Of that total, golf courses account for 61 percent of the small systems (under 1 mgd), landscaped areas five percent. Of large systems, golf courses and landscaped areas account for 24 percent each. The balance in each case goes to fodder and direct consumption food crops.

One of the benefits of using reclaimed water, besides saving existing supplies, is its nutrient content. Most supplies have their share of ben-

DIAGRAM OF PLANT OPERATIONS/COCOA BEACH'S WASTEWATER TREATMENT PLANT



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eficial nitrogen and phosphorous.

But a major problem with effluent, says Iowa State University professor Mike Agnew, Ph.D., is that a pipeline needs to be established to pump it. "If a superintendent has a problem with getting (fresh) water and he's close enough to a treatment plant, he could use effluent," Agnew says.

However, notes Lindholm, "It is expensive to put in a separate system for transport."

Effluent is not completely pure, or drinkable. But with proper treatment and filtration it's pretty close—about 99.9 percent pure, according to Watson.

"The source is the determining factor in its value," Watson says. "The biggest problem is public acceptance."

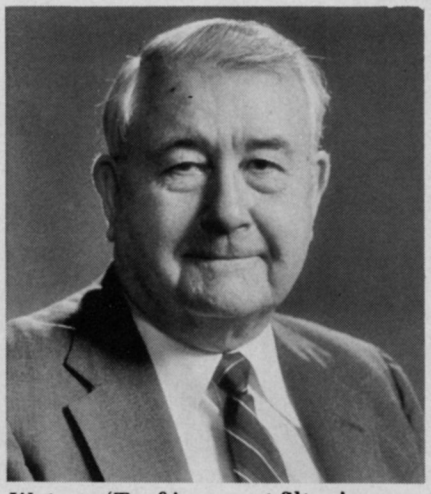
Brian R. McMahon, P.E., of Boyle Engineering Corp., which constructed Florida's huge Conserv II wastewater treatment plant, concurs.

"The public's lack of knowledge about the nature of reclaimed water can make the prospect of irrigating a community's golf course, lawns or food supply with wastewater an unattractive one," McMahon says.

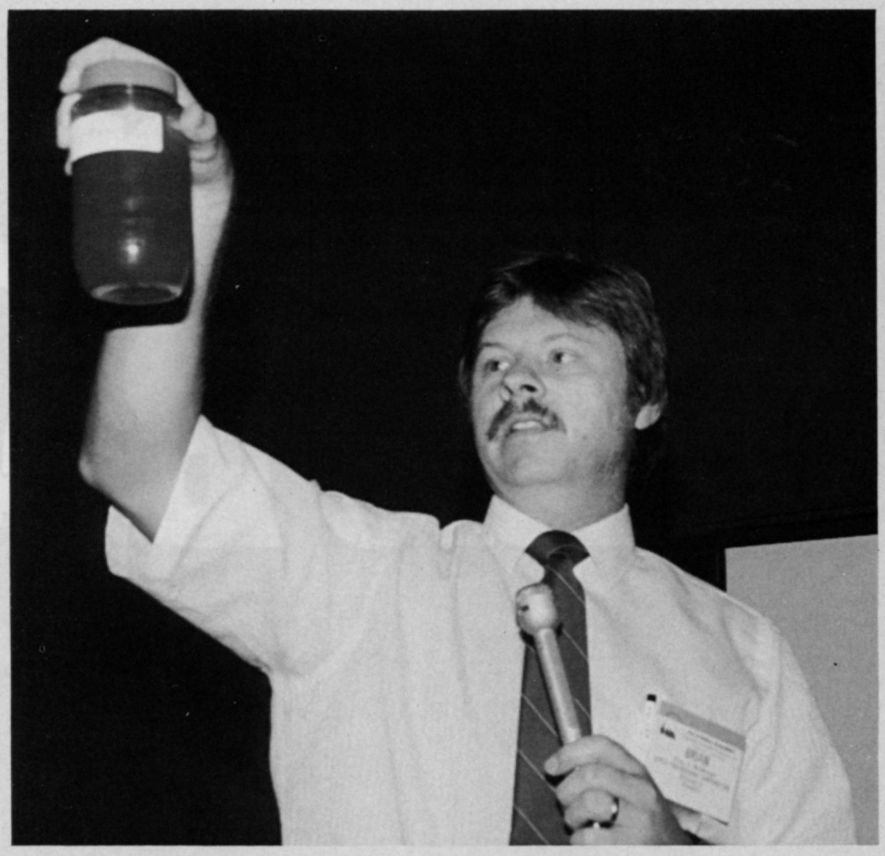
"However," he continues, "knowing the process by which the waste product you flushed down the drain today becomes a valuable resource tomorrow can be the first step in making rational decisions about reuse."

Wastewater can go through several stages of pre-treatment before use, depending on where it will be applied. The first involves screening and settling of large solids from the liquid stream with minimal removal of dissolved or suspended solids. This is generally not acceptable for re-use because of the possibility pathogens remain in the water.

Stage two includes primary plus biological treatment to further remove suspended solids, break down organics and remove some dissolved solids. The finished product is then disinfected, usually with chlorine.



Watson: 'Turf is a great filter.'



McMahon: 'Treated water in many respects can meet drinking water standards.'

According to McMahon, secondary treated water is acceptable in areas restricted to access by the general public.

Tertiary treatment, for areas of full public access, includes sand filtration and chlorination to achieve higher levels of solids removal and disinfection.

"To achieve high level disinfection as defined by the Florida Department of Environmental Regulations," McMahon explains, "the treated water must contain no detectable fecal coliforms. This requirement is quite stringent and usually results in a clear, odorless reclaimed water that in many respects can meet drinking water standards."

Safeguards

Despite filtration, considerations must be made for pumping and storing effluent water. "Exposure to humans must be considered," Lindholm says. "Irrigate at times when humans wouldn't be exposed."

Storage areas (usually ponds or tanks) must be kept circulated to avoid stagnation. Effluent is potentially corrosive on non-plastics and can clog valves and sprinkler heads if larger particles are present. Dissolved salts can also corrode metal parts.

However, Watson says, when treated effluent is used, remaining impurities are filtered out by the turf. "Turf is a great filter," he says. "It permits water to percolate into the soil and back into the groundwater in a very 'pure form.'"

Agnew stresses, though, that "you have to monitor it at all times for salt content." But he adds that filtration processes usually take care of the hazardous salts. He notes that one golf course in Iowa uses effluent that actually has a lower salt content than the town's "fresh" water supply.

Storage areas (usually ponds or tanks) must be kept circulated to avoid stagnation.

"We feel that this is an efficient way to use the water supply," Lindholm says. "In California, we encourage water agencies to re-use the water supply. We think that its use should be increased, and we think it will be."

"It's a great source of water," Watson agrees. "It's an economic way of dispersing wastewater. It permits grass to be grown in areas where it otherwise wouldn't be grown." **LM**

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THE COST OF LAYOFFS

To layoff or not to layoff? With the winter season coming up, it could increase your cash flow to layoff some employees until spring. But, in the long run, you may lose some customers next year.

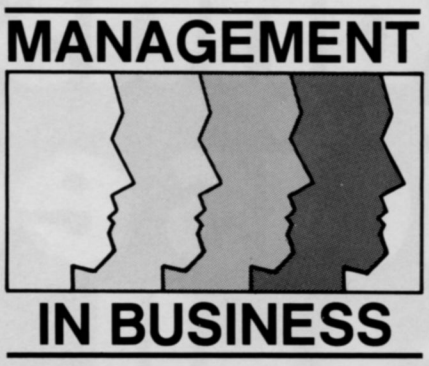
by Rudd McGary and Ed Wandtke

In today's economy, many green industry companies are experiencing the unfortunate after-effects of this summer's dry spell: poor cash flow. Because of this reduction in company profitability, many of you might be seeking ways to reduce your operating costs this winter.

What are the implications of laying off employees that you would have otherwise kept on the payroll for the entire year?

Three areas of concern need to be addressed in order to determine the appropriate course of action:

- What did you plan on having these employees do this winter?
- What are the potential ramifications of laying off these employees this year?
- What will it cost to replace these employees if they do not return next year?



Plan their use

Companies often do not develop a written plan of off-season tasks for employees. They also often do not take the time to assign times for each task performance. If you take the time to detail the tasks and assign time to complete each task, you will be able to determine how many man-hours you need to plan for the winter. This planning is necessary now, if you hope to maintain or improve your financial performance for the year.

Laying off employees

Laying off non-essential employees has been a regular practice at those companies which have not been able to develop such a plan. In some cases, this may be an excellent manner by which you can continually improve the quality of your workers. Others, though, really hate to let potentially good employees leave.

Some states allow a green industry employer to be considered as seasonal with respect to his need for a specific size workforce. This allows the employee, when laid off, to qualify for unemployment benefits sooner, based on the fact that a specific return-to-work date is known at the time of the layoff. Many employees look forward to this time off; others take seasonal employment counter to the turf industry.

Layoff implications

If you choose to lay off some or all of your employees, there are many potential effects on your workforce in the future.

- Employee morale will continue to be low. Individuals worry when it will be their turn to be laid off, especially if layoff policies are inconsistent.
- It will be extremely difficult to attract better employees; ones needed to provide the management and consistency needed for growth.
- There will continually be higher than average turnover of laborers who see no future for them with the company.
- Your company will acquire a reputation in the community of inconsistency of service because of employee turnover.

Cost of layoffs

In determining the cost of layoffs, it is important to consider the total cost of keeping an employee on the payroll. These costs would include payroll, benefits, training, taxes, insurance, medical and life insurance, uniforms, customer turnover and service efficiency.

We have found that customer turnover generally increases at the rate of 30 to 40 percent when the same service personnel fail to return from one year to the next. The higher the customer's financial base, the stronger the bond between service personnel and the customer. In addition, the more interaction between the on-site technician and the homeowner, the lower the customer turnover.

Service efficiency continues to be a key factor, since the costs of equipment and training are rising. So how do you quantify this cost?

Use this formula:

1.) Write down the cost to attract one new customer, in dollars.

2.) Write down your current cancellation rate.

3.) Write down increased cancellation rate due to change.

4.) Figure the adjusted cancel rate by multiplying line 2 by line 3.

5.) Figure the increased customers you need to attract by subtracting line 4 from line 2.

6.) Compute customer turnover cost due to layoffs by multiplying line 1 by line 5.

7.) Write the number of customers serviced at the end of the year.

8.) Write down the full-time employees at the end of the year.

9.) Compute average customers serviced by one employee by dividing line 8 into line 7.

10.) Write down number of customers in the third month of the year.

11.) Write down number of employees in the third month of the year.

12.) Calculate the average customers per employee in the third month of the year by dividing line 11 into line 10.

13.) Figure efficiency cost, line 9 minus line 12.

14.) Multiply efficiency cost, line 13, times average revenue cost.

15.) Figure total cost efficiency plus customer turnover by adding line 6 to line 14.

Conclusion

If your answers to lines 6 and 14 are so small that they are not financially significant to your company, laying off employees is obviously not that expensive. If otherwise, you must change: map a plan as to how you can avoid those costs in the future. **LM**

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Circle No. 128 on Reader Inquiry Card

Ounce of fungicide worth a pound of cure

Jim Ellis, grounds superintendent at Lincolnshire Fields Country Club in Champaign, Ill., feels very strongly about turf disease prevention at the 20-year-old course he has worked on since 1977.

Disease prevention on fairways began only five years ago when Ellis and the previous superintendent began overseeding with ryegrass to change the stand composition.

"The main reason," Ellis explains, "was to help combat what was known at that time as Fusarium blight. However, we also found that the ryegrass gave us excellent competition against *Poa annua*. Because ryegrass is generally vigorous at the same time as the poa, we've been able to hold our own and even decrease the annual bluegrass in some areas."

On the other hand, Ellis has no desire to totally eliminate the original Kentucky bluegrass either. Otherwise, he believes that Pythium blight would take over as a major disease. Hence, he tries to maintain a mixed stand "that will withstand the summers a little better" by overseeding with both species on a regular basis.

"In the past, we were on a treatment program that called for addressing problems as they appeared," Ellis recalls. "In other words, for budgetary reasons, we would do everything agronomically possible to discourage disease, and then treat those areas that became critical. That was essentially the practice for the first 15 years of this course.

"What we are trying to do now is slowly expand our budget in the area of fertilizer and fungicides to where we can get as much use as possible out of a good systemic product. Then if we still get a disease problem we hit it again."

While Ellis admits he has used just about every fungicide on the market, he currently limits his arsenal to a half dozen contact and systemic products— the mainstay of those being Rubigan, Bayleton and Cleary's 3336.

"We basically have two systemics that would be relatively expensive on a weekly basis," he says. "However, because they provide control for three to four weeks, the cost per day is very reasonable. So we may use Rubigan one week, and the next week we may come in with a contact fungicide for another problem," he adds, noting that fertilizer is often applied in the same application. Ellis says he was introduced to Rubigan in his quest for a chemical that would prevent and control dollar spot, which, year in and year out, had been his biggest problem.

"One of the first uses of the product was on a fairway, where we set up test strips in cooperation with Elanco, to evaluate its effectiveness against the disease," he says. "Although there were already active dollar spots on the course, our goal was to see if we could prevent further outbreaks."

According to Ellis, the product not only stopped the disease, but turned the appearance of the turf around. "You could see exactly where the sprayer nozzle quit and where the check strip began," he says. "Not only did it clear up the dollar spots, but the turf that was treated actually looked greener. We've found since then that we also get some suppression of *Poa annua*."

More recently, though, Ellis has been experimenting with Rubigan to control the summer disease previously known as Fusarium blight.

Researchers have found that infection starts below the ground rather than on the leaves of the plant. Hence, a revised approach was taken to treatment and control. "Characteristically, we don't see patch disease symptoms show up until the end of July or the first part of August," says Ellis. "That's when you begin to see the textbook frogeye pattern. That is, you have healthy grass in the center of a full or partial ring of dead or dying grass, surrounded by more healthy grass. As the disease becomes worse, the rings start running together until you end up with one big mottled area."

Referring to research done on his own course in cooperation with the University of Illinois, Ellis adds, "I believe at this point that the primary pathogens are actually working on the roots of the plant. What we are seeing on top may even be other pathogens that are attacking the weak grass plant; and that's when we are seeing the leaf damage. It also explains why you can't get complete control of it with a contact fungicide."

Having worked with both fungicides and patch disease for several years now, Dr. Joe Vargas, turfgrass pathologist at Michigan State University, readily concurs. "Part of the key is applying the fungicide early enough," he says. "By that, I mean May or early June before the disease has a chance to become established." He insists it is equally important to select a fungicide that has proven effective against the disease you are going after. "Because of environmental conditions in our part of the country, it is pretty easy to identify them," he says, referring to the northern states. "We typically see necrotic ring spot on Kentucky bluegrass, summer patch on annual bluegrass and take-all patch on creeping bentgrass. However, as you move south, you may also see summer patch on Kentucky bluegrass. This summer we even saw summer patch on ryegrass. So you are never sure what you're dealing with. In most cases, the only way to tell the difference is to plate them out in the laboratory."

Dr. Vargas recommends an early application of herbicide.

Rubigan, however, has been effective in suppressing all five pathogens.

Speaking from the experience on his own course, Ellis has to agree. Since the spring of 1986, he has been applying Rubigan as part of a program to prevent disease on tees, greens, approaches and those fairways that have exhibited the frogeye pattern in past years. "The way I see it, no one can expect total control when we're not even sure of the problem," he says. On the patch diseases, Ellis notes that Rubigan is not quite as effective.

"It's not the night and day difference you see when you use it on dollar spot, but you can still see where it has been active," he says. "So everyone's line of thought is that the product does have some control of the problem. However, at this point there are still a lot of questions concerning rates, timing of applications, how deep to water it in and how much the different pathogens are affected by all of the above." **LM**

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Oscar Miles, the superintendent at Butler National Golf Club, loves the LESCO 500 Fairway Mower. He should. He and Butler Equipment Manager Mark Winge had the idea of developing a lightweight, five-gang, greensmower-type fairway mower long before the LESCO machine was introduced.

Miles was one of the first superintendents to maintain fairways to putting green standards with triplex mowers. And although he never waivered in his conviction that greensmower-type machines were the way to go, he searched for ways to make the job less labor intensive and time consuming.

Miles found exactly what he was looking for when LESCO engineered the 500 Fairway Mower. Fairway cutting that used to require four mowers is now done with just two of the LESCO machines. And the results are better, too.

"We're interested in close-cut fairways with outstanding quality and dramatic contours," Miles points out. "The LESCO 500 Fairway Mower gives us that."

The LESCO 500 delivers the precision cutting, dramatic striping and day-in and day-out dependability Oscar Miles requires. It can do the same on your course.

ORDER NOW AND TAKE ADVANTAGE OF THE GENEROUS DISCOUNTS OFFERED DURING THE LESCO EQUIPMENT EARLY-ORDER PROGRAM.

For details, contact your LESCO sales representative or call toll free.
Nationwide • (800) 321-5325
In Ohio • (800) 686-7413

LESCO

LESCO, Inc., 20005 Lake Road, Rocky River, Ohio 44116
(216) 333-9250

Circle No. 124 on Reader Inquiry Card

Small business and the 'lawsuit lottery'

by Edward R. Court

In fewer than three years, my product liability insurance has risen from $6,000 to $40,000 per year. And the $40,000 this year buys only one-tenth the coverage I had three years ago.

I have spent the past 19 years building my security gate manufacturing and installation business to its present size (I now employ 45 people). All I have worked for—and the jobs of my employees—could be lost in a single judgement in what I believe is a "lawsuit lottery" for the money-grabbing plaintiffs and attorneys.

Every gate I install raises the odds against my company. The most frustrating part of the gamble is that a judgement against me could have little or nothing to do with the quality or performance of my product.

When I first began to notice the effects of the liability crisis, I felt a lot of resentment toward the insurance industry. However, as my understanding of the problem grew, I realized that for the most part insurance companies were reflecting their cost of doing business today. Most insurance companies were not willing to quote product liability rates, and many of them were getting out of the product liability market. That is not the kind of response you see when there is money to be made.

Liability juggernaut

In 1984, insurance companies paid out $1,552,744,000. More than $1 billion of that was for non-economic damages—that is, for pain and suffering. Legislation like Proposition 51 in California will help control these high costs. Unfortunately, however, it doesn't put any limit on the amount of damages that can be awarded for non-economic reasons.

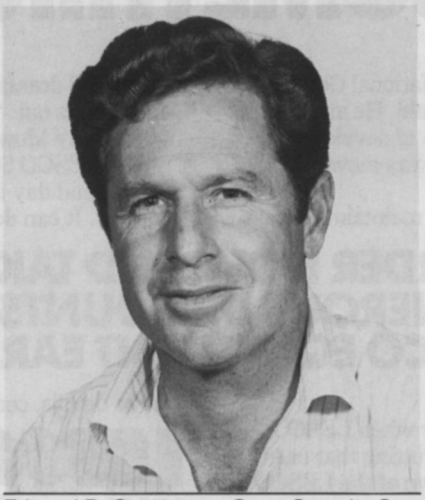
The bottom line is this: Unless the cost of the system is reduced, there will be little or no reduction in companies' insurance premiums and no assurance that companies will keep the assets their owners have spent a lifetime accumulating.

Today, people are more willing to sue than ever before in our history. Between 1980 and 1984, lawsuits in Los Angeles County grew at a rate four times faster than the population. In 1985, lawsuits in Los Angeles County grew at a rate 13 times faster than the population, according to county records. Wherever you look attorneys are encouraging lawsuits.

A call for reforms

If the cost of our insurance is to be reduced, we will have to take these dollars away from the special interest groups perpetuating this condition. To do that, we need reforms limiting liability. Some suggested reforms include:

- Preclude liability where the dangerous aspect of a product is inherent and recognized by the ordinary user. Preclude liability when the product provides an important benefit and the known risk is unavoidable. Should a lawn mower retailer be responsible for someone's heart attack?
- Eliminate the Collateral Source Rule. Today juries cannot be told an injured person has already received payment for his or her injury from another source, such as a personal health plan or a government agency. Juries should be able to consider all relavent information to determine how much an injured party needs or deserves.
- Provide immunity to volunteer directors and officers of a non-profit corporation who act in good faith.
- Grant design immunity to local governments. If a local government built a road 30 years ago that today wouldn't be considered safe (with the increased traffic and present safety standards), don't hold it liable.
- Attorneys receive 30 to 50 percent of everything a person gets. Limit them to a sliding scale whereby they would receive 33 percent of the first $100,000, 25 percent of the next $100,000, and 10 percent of everything over $200,000. The injured person would then receive more of the money he or she needs, and the attorney would not have a financial incentive to persue long and costly lawsuits (even when his or her client might be better served by a quick settlement).



Edward R. Court owns Court Security Systems in Van Nuys, California.

To be done...

We need reforms to control the many greedy attorneys and the many greedy so-called victims who see dollar signs every time someone has an accident. In 1975, the medical industry in California got the Medical Injury Compensation Reform Act passed, which contains many of the reforms I've detailed. As a result, the average malpractice case nationally costs $974,858, while in California it is only $369,662. Similalrly, a neurosurgeon practicing in New York pays $103,000 per year for malpractice insurance, while in California his counterpart pays $42,000. We need the same kind of reforms to protect our businesses.

I ask myself, and you should ask yourself, "How secure am I?" Could you become the next jackpot in the lawsuit lottery? The answer is "yes" for everyone.

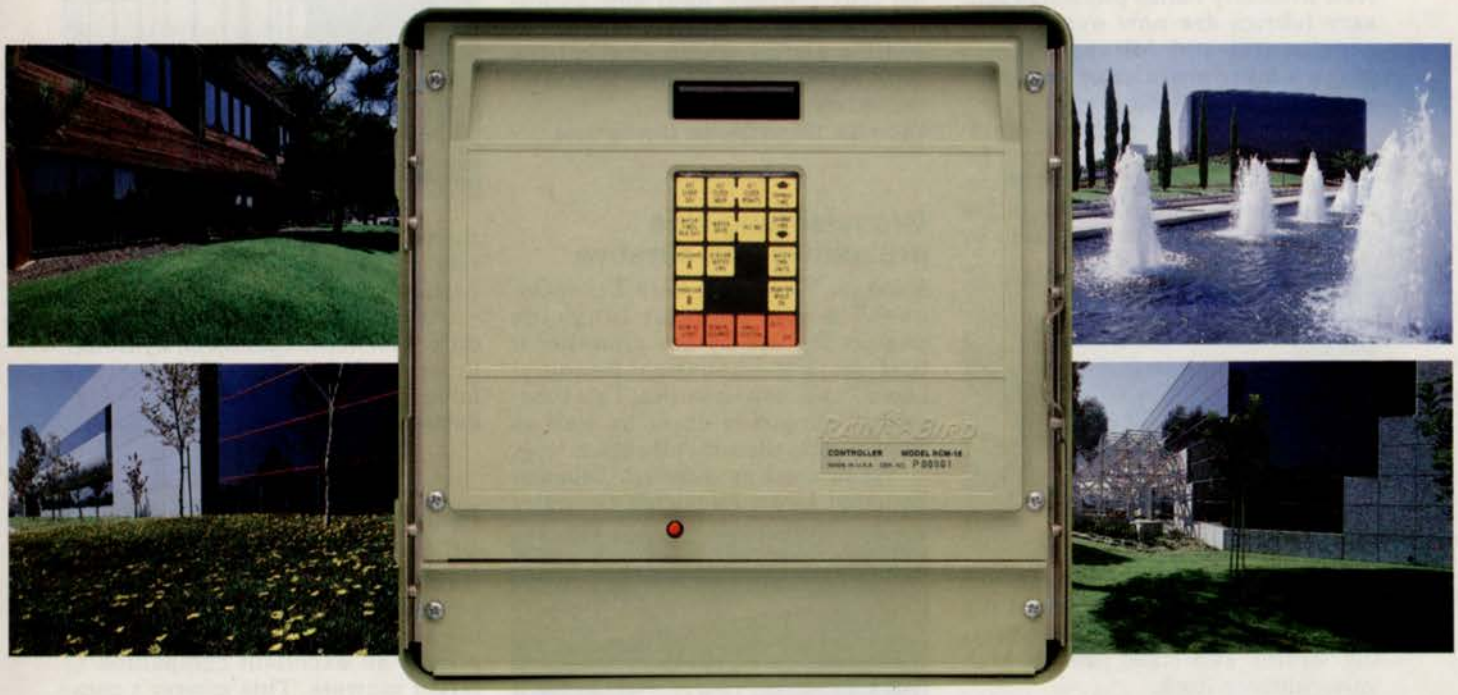
Our liability system is out of control. We must bring back a sense of fairness and justice to this system. Stop complaining to your insurance agent. He or she fears the same thing every day. Take 20 minutes and write a letter to your state and federal legislators. Tell them you want reforms in our liability system and tell tell them you want to know what they're going to do about it.

When you see a liability reform bill on the ballot, get to the polls and vote. One thing you shouldn't do is agree with me and then do nothing. Take time and voice your opinion. It might be your business and future you're helping to save.

There are well-run organizations in virtually every state working to solve the liability crisis. Join them and get involved. In California, contact the Association for California Tort Reform at (916) 442-1111. Nationally, contact the American Tort Reform Association at (202) 442-1111.

LM

The Workhorse



...with more horsepower!

RCM adds 18- and 24-Station Models.

Next time the job requires an 18- or 24-station controller, consider the RCM Series from Rain Bird.

The addition of 18- and 24-station models to the existing 4-, 6-, 8- and 12-station family means there is an RCM controller for virtually any residential or commercial application.

These new models offer all the outstanding features that have made RCMs so popular including simple operation, independent dual programming capability and a convenient 14-day cycle. And, they offer a NiCad battery recharge circuit that delivers maximum program protection during power outages and a new deep-drawn, seamless cabinet for unsurpassed rust protection.

The RCM Controller. . .a workhorse with the breeding of a thoroughbred.

3 YEAR *Trade Warranty*

For more information, call our TOLL-FREE number

1-800-999-1229, Ext. 305

Rain Bird Sales, Inc. Turf Division
145 N. Grand Avenue, Glendora, CA 91740

RAIN BIRD®

Circle No. 135 on Reader Inquiry Card

PRODUCTS

Protective fabrics for overwintering

New Kimberly Farms protective nursery fabrics are now available to ornamental and foliage nursery growers for overwintering and other seasonal frost protection uses.

The soft, white fabrics—spunbonded polypropylenes known for their porosity, insulation and UV-stability properties—are products of five years' research and development by

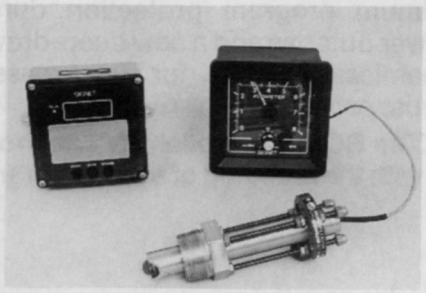
Kimberly-Clark. Both lightweight (0.6 oz. per sq. yd.) and heavyweight (1.5 oz. per sq. yd.) nursery fabrics in varying widths and sizes protect high value nursery stock.

Circle No. 190 on Reader Inquiry Card

Automated controls mean cost-effectiveness

Fertigation allows groundskeepers to inject liquid fertilizer into an existing irrigation system. As a result, labor is greatly reduced, fertilizer costs are lowered and turf growth is stabilized.

In such applications, Signet Industrial, a manufacturer of flow monitoring and process control equipment, offers a variety of control systems. The MK2517 Perma-Flo flow sensor, which can be inserted into any standard 1½-inch threadolet fitting, measures water volume. This is typically



done on the main line from a booster pump station. After a specified amount of water has passed the sensor, Signet's MK9520 Feed Pump Pulser sends a pulse signal to an injection pump, which then delivers liquid fertilizer into the main irrigation line in pre-designated quantities.

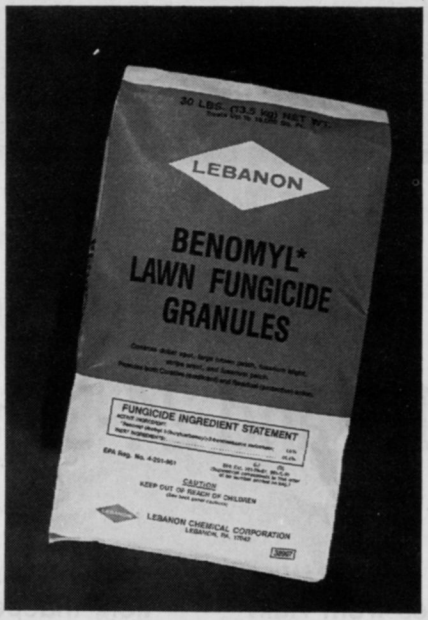
Signet's MK585 Flow Alarm completes the system. This analog meter not only provides local flow indication, but also such safety features as audible alarms which shut off the main valave in cases where flow rates exceed desired limits.

Circle No. 191 on Reader Inquiry Card

Granular fungicide preventive and curative

Lebanon Total Turf Care has introduced a new granular fungicide product for use by the professional turf market—Lebanon Benomyl Lawn Fungicide Granules. This time-proven fungicide cures as well as stops certain diseases all season long.

When used as directed, Lebanon Benomyl Lawn Fungicide Granules



control dollar spot, large brown patch, *Fusarium* patch, *Fusarium* blight and striped smut. It is available in 30-pound bags that provide up to 15,000 sq. ft. of coverage.

Circle No. 192 on Reader Inquiry Card

Modular landscape body is versatile

Arbortech introduces a new, inexpensive modular landscape body which provides the versatility of fitting all standard flatbed units. Prior to this, body panels were designed to match a specific flatbed truck's body slot spacing only.

With Arbortech's modular body, users now have the versatility of adapting a landscape body to more

than one flatbed design, thus extending useful product life and performance.

Arbortech options include heavy duty steel flatbed platform, hydraulic hoist, under-body tool boxes and falvanneal steel roof panels.

Circle No. 193 on Reader Inquiry Card

Mid-size mower makes an excellent companion

Exmark's 36-inch commercial power mower has the power to handle tough mowing jobs on its own, plus is an excellent companion to larger mowers. This mower's compact design and angled-corner deck provide excellent handling, balance and stability on slopes, Exmark says.

Single-adjust caster pins allow quick adjustments in mowing heights from 1⅛ to 5 inches in ⅛-inch increments. The unique, hinged grass-discharge chute flips up for quick and easy catcher attachment, and access into tight spaces.

This Exmark is available with 8 or 12 hp Briggs & Stratton I/C engines. It also has two tranmission options variable speed or five-speed Peerless.

Circle No. 194 on Reader Inquiry Card

Increased economy from sprinkler head

Increased economy is added to Toro's line of best-selling sprinklers, with the introduction of its new Super 604 Full Circle Sprinkler for medium residential and commercial turf areas. This new product has a lower precipitation rate to reduce runoff and waste.

The Super 604 features a dual-nozzle with pop-up, to a nozzle height of 3⅛ inches for use with tall grasses. In addition, the Super 604 has an adjustable water radius feature offering up to 25 percent reduction in radius to prevent overspray.

Circle No. 195 on Reader Inquiry Card

continued on page 64

Look closely at this course. No dollar spot in sight. Not even resistant dollar spot, thanks to Rubigan.

Rubigan controls dollar spot on your tees, greens and fairways for only about 10 cents per 1,000 square feet per day. That's all. And you get a full 28 days control with just one 0.4 oz. application per 1,000 square feet.

Now look closer. Notice there's also no fusarium blight, necrotic ring spot, summer patch or take-all patch. And no large brown patch, either, with a Daconil 2787® tank mix.

Only Rubigan is labeled to prevent and treat all these harmful diseases. No wonder Rubigan is the superintendents' choice for dependable dollar spot control in all types of weather.

This year, make your course look this spotless. Make it dollar spotless with Rubigan. See your Elanco distributor. Or call toll-free: **1-800-352-6776.**

Elanco Products Company
A Division of Eli Lilly and Company
Lilly Corporate Center
Dept. E-455, Indianapolis, IN 46285, U.S.A.
Rubigan®—(fenarimol, Elanco)
Daconil 2787®—(chlorothalonil, SDS Biotech)

Circle No. 109 on Reader Inquiry Card

Dollar spotless.

PRODUCTS *from page 62*

Plant care products are safe, effective

PEP plant food products contain a natural growth stimulant enriched with chelated micronutrients which promote rapid cell growth, disease resistance, earlier maturity, lusher foliate, brighter more abundant blooms and increased plant production.

PEP plant food is packaged as a ready-to-use liquid, a liquid concentrate and as a time-released granular. Special formulated mixes are for every type application ranging from lawns to decorative indoor plants.

Other NCF products include Kleen

leaf shiner and Saf-T-Oil insecticide.

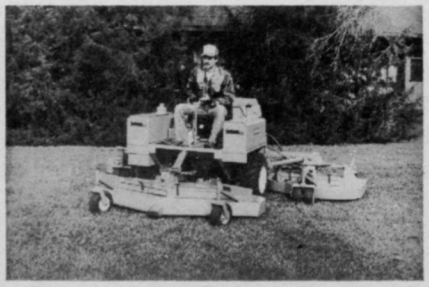
For professional lawns, PEP has turf products with growth stimulant that result in visual proof of filling divots or bald spots in 72 to 96 hours after application.

Circle No. 196 on Reader Inquiry Card

Need a wide cut? Try this one

A full 144-inch cut, true dual-hydrostatic zero-turn radius capability and a 42½ hp water-cooled diesel engine are the main features of the new 4500D Turf Runner being introduced by the CTL Corp.

Developed from the ground up as a



144-inch rotary cut machine, it features hydraulic drive wing decks, direct-drive front deck and hydraulic lift on all decks. The machine folds to 78-inch width for easy transport, with a maximum ground speed of 9 mph. It carries a 20-gallon fuel tank and 20-gallon oil tank with oil cooler. The fail-safe hydraulic-release torque hubs are designed to deliver 11,000 inch/pounds of torque to each drive wheel.

Circle No. 197 on Reader Inquiry Card

New line of mid-size walk-behinds is announced

Howard Price Turf Equipment of Chesterfield, Mo. has introduced a new line of mid-size walk-behind mowers.

Model WB48K offers a 48-inch deck while Model WB36K has a 36-inch deck. Both mowers are powered by a Kawasaki 12⁴-hp air-cooled engine.

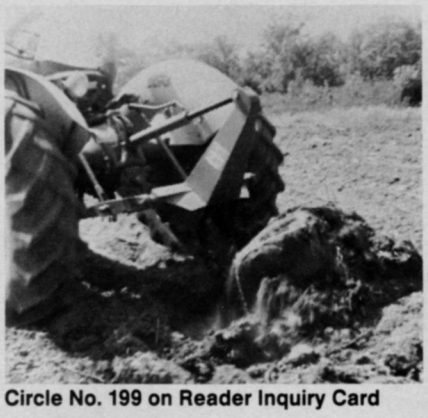
Standard features include top greaseable spindles, easily-removable deck covers, double drive belts, five-speed transmission with reverse, pneumatic caster wheels and individual wheel brakes. Models WB48K and WB36K are designed to be highly productive and maneuverable while offering the user ease of maintenance.

Circle No. 198 on Reader Inquiry Card

Remove surface stones in minutes

Terracare Products Company of Pardeeville, Wisc. has introduced the Stone Ex Tractor.

The Stone Ex will remove surface stones in minutes, Terracare says. The tractor is fully hydraulic and is used with a 3-point hitch. It can also be used for many other heavy lifting jobs.



Circle No. 199 on Reader Inquiry Card

EVENTS

NOVEMBER

6-9: International Irrigation Exposition and Technical Conference, Las Vegas, Nev. Contact: Irrigation Association, 1911 N. Fort Myer Dr., Suite 1009, Arlington, VA 22209; (703) 524-1200.

7-10: Professional Lawn Care Association of America, Louisiana Superdome, New Orleans, La. Contact: James R. Brooks, 1225 Johnson Ferry Rd. NE Suite B-220, Marietta, GA 30068; (404) 977-5222.

8-11: New York State Turfgrass Association Turf and Grounds Exposition, Rochester Riverside Convention Center, Rochester, N.Y. Contact: NYSTA, PO Box 612, Latham, NY 12110; (800) 873-TURF or (518) 783-1229.

9: Guelph Turfgrass Symposium, University of Guelph, Ontario, Canada. Contact: Division of Continuing Education, (519) 824-4120.

9-11: Fresno Farm and Landscape Equipment Show, Fresno, Calif. Contact: AgFresno, (209) 255-0764.

10-11: 22nd Annual Clemson Turfgrass Conference. Myrtle Beach Hilton, Myrtle Beach, SC. Contact: Dr. Landon C. Miller, Horticulture Dept., Clemson University, Clemson, SC 29634; (803) 656-4966.

13-15: Southern Turfgrass Conference, Montgomery Civic Center, Montgomery, Ala. Contact: Richard Duble, 1003 Howe Dr., College Station, TX 77840; (409) 693-1656.

13-15: CLCA Annual Meeting, Phonecian Hotel, Scottsdale, Ariz. Contact: Larry Rohlfes, (916) 448-CLCA.

14-16: Penn State Golf Turf Conference, Keller Conference Center, University Park, Pa. Contact: Dr. Joseph Duich, Dept. of Agronomy, 405 Ag. Admin. Bldg., University Park, PA 16802; (814) 865-9853.

14-16: Northeast Maintenance Management Institute, Sheraton Springfield West, Springfield, Mass. Contact: Cliff Markell, (203) 721-1055.

18-20: Green Team Conference and Trade Show, Buena Vista Palace, Lake Buena Vista, Fla. Contact: PGMS at Green Team Trade Show, 12 Galloway Ave., Suite 1E, Cockeysville, Md. 21030; (301) 667-1833.

Why *our post* should be part of *your pre* plan for crabgrass.

ACCLAIM® makes your pre work better. Because weather can affect the performance of preemergence herbicides, many lawn care professionals have resorted to making *two* pre applications. But now, Acclaim® 1EC Herbicide provides a *new* approach.

By tank mixing Acclaim with your late pre applications, you can skip the early pre treatment. An Acclaim/pre tank mix provides low-rate postemergence control of emerged crabgrass and insures that the pre will be at full strength later into the season, minimizing the need for later rescue treatments.

ACCLAIM works better on reseeded lawns. After a season of drought, you don't want a herbicide to interfere with established fall-seeded turf. That's the beauty of Acclaim. You can delay or eliminate your pre on newly established turf and confidently plan on crabgrass control with Acclaim. Acclaim even allows you to overseed almost immediately before or after application. So even as crabgrass is dying, you're replacing it with lush, beautiful turf.

ACCLAIM for total flexibility. Acclaim gives you new confidence against crabgrass, both early and late. As a rescue, Acclaim provides control you can count on without turf damage. By treating borders and sidewalk areas early, you'll control crabgrass before your customers ever see it. And Acclaim can be used near ornamentals without damage.

The money-saving ACCLAIM program. Take advantage of the special offer for lawn care professionals: Buy 3 gallons of Acclaim before March 31, 1989 and get 1 gallon free.

Read and follow label directions. Acclaim is a registered trademark of Hoechst Celanese Corporation. The name and logo HOECHST are registered trademarks of Hoechst AG. The name and logo ROUSSEL are registered trademarks of Roussel Uclaf S.A.

Hoechst Roussel

ACCLAIM®. Because your turf is always on display.

Circle No. 145 on Reader Inquiry Card

CLASSIFIEDS

RATES: $1.20 per word (minimum charge, $35). Bold face words or words in all capital letters charged at $1.45 per word. Boxed or display ads: $100 per column inch-1x (one inch minimum); $95-3x; $90-6x; $85-9x; $80-12x. (Frequencies based on a calendar year). Agency commissions will be given only when camera-ready art is provided by agency. For ads using blind box number, add $15 to total cost of ad. Send ad copy with payment to Dawn Nilsen, LANDSCAPE MANAGEMENT, 1 East First Street, Duluth, MN 55802 or call 218-723-9505. Fax Number 218-723-9615.

BOX NUMBER REPLIES: Mail box number replies to: LANDSCAPE MANAGEMENT, Classified Ad Department, 1 East First St., Duluth, MN 55802. Please include box number in address.

BUSINESS OPPORTUNITIES

LEARN Professional Landscaping and Gardening at home. Accredited program provides thorough training in all phases of commercial and residential landscaping. Certificate awarded. Free booklet describes program and opportunities in detail. Lifetime Career Schools, Dept A-349, 2251 Barry Ave., Los Angeles, CA 90064. 12/88

CURB KING: Continuous landscape borders, low investment and high returns. 1-800-423-1452. 11/88

WANT TO BUY OR SELL a golf course? Exclusively golf course transactions and appraisals. Ask for our catalog. McKay Golf and Country Club Properties, 15485 N. East Street, Lansing, Michigan 48906. Phone (517) 484-7726. TF

BUSINESS OPPORTUNITIES: Central Ohio granular lawn service established 17 years. Accounts, vans & equipment. Inquire: J.L. Greene, 1285 Northport Circle, Columbus, Ohio 43235. 11/88

FOR SALE: Established garden center & landscape business, East Central Illinois. Located on busy highway. Home, garden shop, sales yard, with all inventory $100,000. Possible contract. (217) 283-7013. 11/88

HELP WANTED

MANAGEMENT

Due to our aggressive expansion program in the midwest, east coast and southwestern regions, we are needing management personnel for all phases of our tree & shrub and lawn care services, in both residential and commercial operations. If you are "Results-Oriented" with a strong desire to achieve and high personal goals, send resume including salary history to:

Corporate Recruiter
Ever-Green Lawns Corp.
1390 Charlestown Ind. Dr.
St. Charles, MO 63303

SUNNY SOUTHERN CALIFORNIA: Established full Service Landscape Installation and Landscape Maintenance Company. Commercial and Industrial Contracts. 1 Million $ of work in Progress with very large backlog. Company will operate on its own with existing management Excellent Customer Base. Non Seasonal. All inquiries will be treated discreetly. By Principal. Will consider terms. Write to LM Box 462. 11/88

NURSERY MANAGER - Take charge person, strong knowledge of plant material and plant production. Tremendous growth potential. Eastern Long Island. Send resume to: Box 226, Centerport, New York 11721. 11/88

Career Opportunity. Established Southwest Florida firm seeks qualified individual to take over pest control portion of business. Must be quality and result oriented. Salary limited only by your abilities. Send resume to Lawn Care Extraordinaire, 395 Havanah Road, Venice, FL, or call 813-488-0688. 11/88

ARE YOU A NATURAL?

Then bring your talents to us. We're **SAV-A-TREE**, one of the fastest growing arboricultural service companies in the industry, specializing in natural holistic tree and shrub care.

We are dedicated to excellence and are seeking ambitious, detail oriented individuals to join our expanding team.

VP Sales

As a member of our management team responsibilities include major account management, sales forecasting and budgeting, marketing, recruitment, and training. Candidates should have an undergraduate degree or equivalent and an in-depth knowledge of arboriculture.

Sales Representative

Responsible for developing and servicing a customer base in an assigned territory. Ideal candidate will have a college degree in horticulture or a related field and a strong desire to succeed. Previous sales experience is a plus.

Director of Training and Safety

Responsible for training and supervising all field personnel to ensure that established quality control standards are maintained. This will include all phases of tree work.

Position requires at least five years of experience in all aspects of tree and shrub care. Candidates must have excellent interpersonal skills and the ability to develop and administer a formal training program.

These positions offer outstanding compensation.

Send resume with salary requirements to:

SAVA TREE®
Stephanie Parker
360 Adams Street
Bedford Hills, NY 10507

MANAGER OF CONSERVATORY & HORTICULTURE: Mid-level management position, responsible for large conservatory, supporting greenhouses, and several public gardens and Horticultural areas. Directs development, marketing, maintenance, education programs, and staff of thirty. Strong leadership, administrative skills, and good background in Horticulture required. **SALARY:** $27,900 - $30,100. Send Resume' to: Dennis Noak, 705 E. State Blvd. Ft. Wayne, IN 46805. 11/88

An experienced foreman and professional installers needed for growing irrigation construction company in Mid-Atlantic state. Competitive wages and benefit package. Excellent opportunity with growth potential for serious individuals. Call Duncan Irrigation, 804-296-5500 or send resume information to: P.O. Box 6842, Charlottesville, VA 22906. 11/88

PLANT ACQUISITION ASSISTANT—National award-winning landscape firm seeks energetic and flexible individual for plant acquistion assistant. Candidate should have a working knowledge of landscape plant materials, be quality conscious and possess good communication skills. Knowledge of local/regional nurseries and suppliers would be beneficial. Send resume with references to Dave Scatterday, Martin Associates, 24380 N. Highway 45, Vernon Hills, IL 60061. 12/88

MANAGER LANDSCAPE OPERATIONS: San Francisco Area Company is seeking manager with a proven background in Turf & Ornamental management as well as irrigation installation & repair. Employee & Customer scheduling & administration are primary to the job. 30K Yr. start plus full benefit pkg. Send resume LM Box 463. 11/88

Production/Sales/Management: Expanding Sod company seeks individuals with sod production experience and/or turfgrass sales background. Requires an individual that is willing to grow with the company and that is quality conscious. Company located on the East Coast with various sales and production locations. Good salary and benefits. Send Resume to: United turf, Rt. 1 - Box 170, Powells Point, NC 27966. 11/88

PROFESSIONALS

Due to our aggressive expansion program in the Southwest & West Coast regions we are hiring experienced landscape maintenance & construction personnel. We are looking for career minded individuals to fill openings for:

Administrators
Supervisors
Salespersons
Foremen
Irrigators

Positions Available in:

Los Angeles
Santa Ana
Palm Springs
Dallas/Ft. Worth

We offer excellent salary & benefits. Send resume to **LM Box 459.**

LANDSCAPE EMPLOYMENT OPPORTUNITIES - One of the Midwest's largest commercial landscape contracting and maintenance firms seeks motivated, quality individuals to fill the following positions: Landscape Construction Superintendent, Estimator/Contract Administrator, Landscape Materials Buyer, Foremen, Pesticide Applicators. Excellent salary and benefit package. Send resume to: Reinhold Landscape, Inc., 23216 Telegraph, Flat Rock, MI 48134. 11/88

TREE TRIMMERS. The City of Los Angeles needs hard working, conscientious people with one year of full time paid experience in tree trimming or treatment work to fill openings in the Tree Surgeon Classification. Good benefits and promotional opportunities. Contact the Street Tree Division at (213)485-5675. 11/88

WANTED - Aggressive Manufacturer's Reps - Manufacturer of agricultural, golf course, municipal and lawn & garden spraying equipment is seeking qualified reps with experience in sprayer sales. Seeking nationwide network, exclusive territory contract, excellent technical support and top of the line equipment. Send resume and current line card to: The Broyhill Company, P.O. Box 475-CB, Dakota City, NE 68731-0475. Phone: 1-800-228-1003. 12/88

HELP WANTED

CAREER OPPORTUNITIES

Expanding Sunbelt region firm has several growth-oriented positions available for experienced and knowledgeable individuals. Openings for:

Landscape Sales Representatives
Landscape Maintenance Supervisors
Landscape Construction Supervisors
Foremen
Foremen Trainees
Pesticide Applicators
Arborists

Horticultural education and/or experience required. We offer professional wages and benefits for career-minded people. Send resume with education, work and salary history to:

Personnel Department
1801 Borchard
Santa Ana, CA 92705

SALES REPRESENTATIVES - Landscape maintenance firm that has been established for 30 years in southeast Florida has several openings for over achievers. We are looking for people who can challenge our top sales person who sold over $1,000,000 in 1987. Applicants should have a background in horticulture, turfgrass management or pest control. 30-50k first year's earnings. Applications for training supervisors, service routes and pest control technicians are also being taken. Call or write Mr. DeMaria at 310 Northwest 16th Terrace, Pompano Beach, FL 33064, 305-971-0110. 11/88

Established Central Florida landscape contractor has an opening for a highly qualified operations manager for its maintenance division. Ability to schedule, organize and manage people in a rapidly growing organization. Heavy field experience and a commitment to quality work required. Opportunity for an aggressive person to be a key member of a top-notch team. Excellent salary and benefits. Call Mr. Singh (305) 831-8101. 12/88

We are recruiting!

We're looking for knowledgeable people in the following areas:

Environmental Care, Inc.
landscape management

Arbor Care
commercial & industrial arboriculture

Interiorscape Division
interior landscape maintenance

Positions available in:

Los Angeles	East Bay	Inland Empire
Sacramento	Santa Ana	Phoenix
San Diego	San Jose	Denver
Houston	Ventura	Colorado Springs
Palm Springs		

Send resume to:

Robert L. Scofield
Personnel Department
24121 Ventura Boulevard
Calabasas, CA 91302

an equal opportunity employer by choice

ServiceMASTER.

If you are in the lawn care business, ...in a related field, or...just looking to get started...

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1-800-255-9780

CHIEF LANDSCAPE ARCHITECT: For newly created metropolitan park district in Northeastern Ohio. Will administer the planning office of the park district, assisting in long range planning, plan development of park areas and facilities, coordinate work of consultants, schedule, coordinate, and supervise construction projects. BS in Landscape Architecture required. Must be registered LA in Ohio with four (4) years experience in design and Project Management. Excellent salary and fringe benefit package. Send resume to LM Box 461. 11/88

SUPERVISOR OPPORTUNITIES. "INC. 500" company, the area's largest Design/Build and Maintenance/Irrigation firm is seeking quality individuals to supervise production operations. **LANDSCAPE SUPERVISOR:** planting and construction. **MOWING SUPERVISOR:** contract programs. **CHEMICAL/HORTICULTURE SUPERVISOR:** chemical applications, fertilization, pruning and plant care. Responsibilities include employee training, supervision, scheduling, customer relations, quality control and sales assistance. Experience, strong plant knowledge and communication skills are required. Great opportunity to work with a quality and results oriented team. Salary, benefits, profit sharing plan and company vehicle. Send resume: Suburban Landscape Assoc., P.O. Box 2342, Davenport, Iowa 52809, Attn: Monty Mitchell. 12/88

NEED LANDSCAPE WORKERS? We can solve any labor problem you have. We have documented workers as well as foremen, leadmen, irrigators and architects available at a price you can afford. Call today! **AMIGOS** Dallas, Texas **214-634-0500.** 11/88

LANDSCAPE SALES CONSULTANTS: Texas' largest commercial landscape maintenance firm is currently seeking sales consultants for our Houston branch. 2 years proven outside sales experience, or an industry related degree preferred. Landscape management experience helpful. Compensation package includes, base plus commission, car allowance, incentive bonus programs, and company benefits. For consideration contact: Branch Manager, Maintain, Inc., 16008 Boss Gaston Road, Richmond, TX 77469. (713)277-2867. 11/88

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MARKETING/SALES MANAGER — Must be progressive minded, large budget for 3-6 branches of planning and implementation training sales managers, 3 years minimum, verifiable experience in LM field.

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We are a full service multi-department company with a growth curve created by careful placement of qualified individuals. Competitive salary & benefits with solid growth potential. Resumes to: Landscape Opportunities, P.O. Box 471333, Tulsa, OK 74147-1333.

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LANDSCAPE PROFESSIONALS!

Nationally-ranked landscape contracting firm **SCAPES, INC.** is seeking to hire highly-trained professionals into the position of **PROJECT MANAGER.** We have openings in our Atlanta and Washington, DC offices. Higher pay and bonuses for qualified person. Please contact **SCAPES, INC.** at (404) 956-7500 for interviews. Also hiring **EXPERIENCED LANDSCAPERS.**

The Northern Illinois Toro distributor for commercial and irrigation products is seeking an individual for an irrigation department position. Responsibilities will include operations management and customer service/order entry duties. If qualified send a resume to Chicago Turf & Irrigation, 1170 W. Ardmore, Itasca, IL 60143. 12/88

LANDSCAPE PROFESSIONALS: Chapel Valley Landscape Company in the Metro Washington, DC area, has the following career opportunities available: Sales Representative, Landscape Architect. Very competitive salaries and benefit package available. Call (301) 924-5400. E.O.E. 11/88

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GROW WITH TURF: Career opportunities are available for professionals with experience in lawn care, landscaping and irrigation. We're looking for aggressive self-starters to join our organization. Thrive on the challenge of our growth. Enjoy above average earnings and excellent benefits. Send resume and salary requirements to Turf, P.O. Box 433, Moorestown, NJ 08057 or call (609) 778-0780. 11/88

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OFFERING YOU: Subsidized housing, excellent competitive salary & benefits, rewarding teamwork atmosphere, and an exceptional way of life in the beautiful Hamptons.

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Supervisors & Forepersons: Glen Summit Nurseries located in West Central New Jersey has supervisory and foreperson positions open in rapidly growing field of landscape maintenance and construction. If you feel you are ready for advancement or are under-employed in your present position, call us for confidential interview at 201-735-4400, 8 a.m.—4:30 p.m. or send resume to: Glen Summit Nurseries, Inc., P.O. Box 209, Pittstown, NJ 08867, Attn: Mr. Pensyl. 2/89

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Florida Landscape Contractor in business 15 years, has an opening for an experienced landscape architect or highly qualified sales person to handle design build sales and business development. Applicant must be a self-starter and possess strong sales skills. Unlimited potential in a growing firm with a top notch track record. Contact Mr. Singh (305) 831-8101. 12/88

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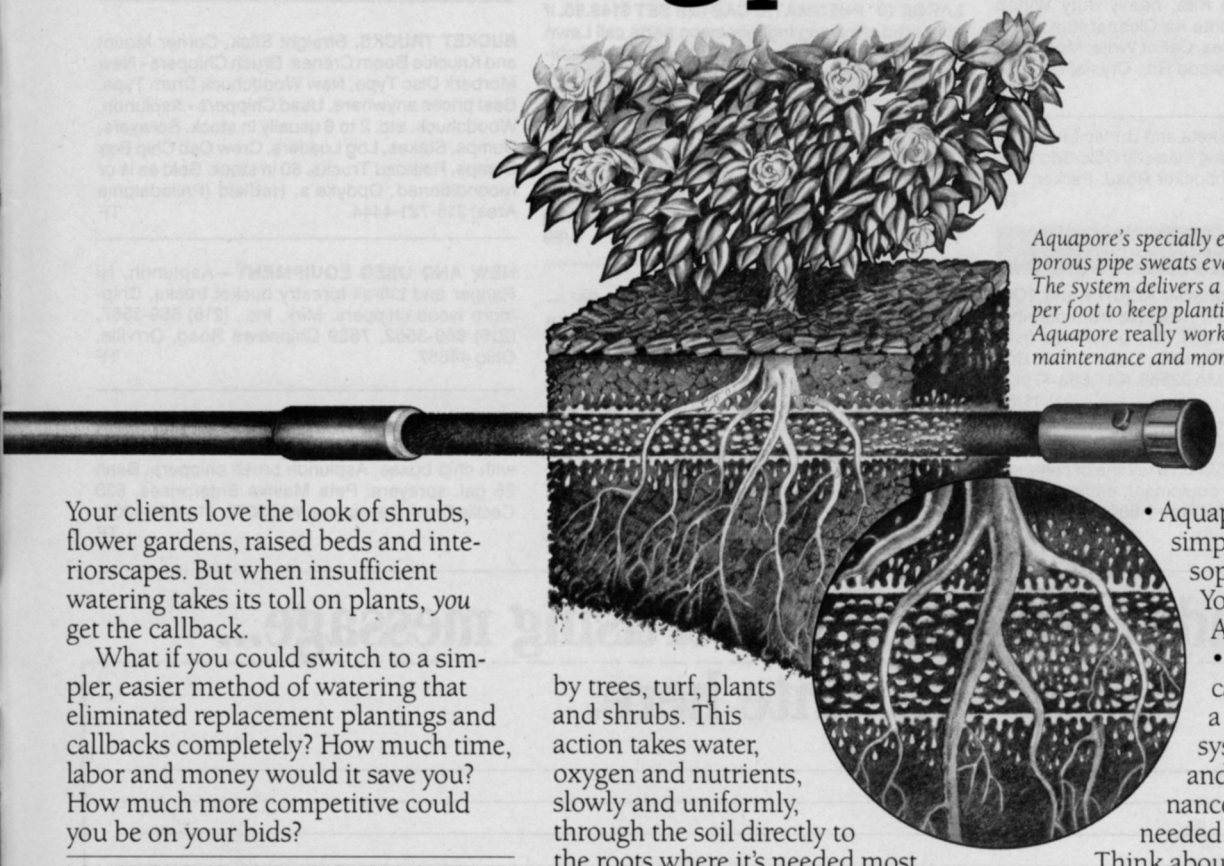

Aquapore's specially engineered and patented porous pipe sweats evenly along its entire length. The system delivers a constant volume of water per foot to keep plantings optimally watered. Aquapore really works – saving labor, water, maintenance and money!

Your clients love the look of shrubs, flower gardens, raised beds and interiorscapes. But when insufficient watering takes its toll on plants, *you* get the callback.

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Aquapore features a patented, porous commercial grade rubber pipe having a unique sweating system which dispenses water evenly. When placed in the soil it acts as a wick. The capillary action of the soil draws moisture from the porous tubing, replacing water used by trees, turf, plants and shrubs. This action takes water, oxygen and nutrients, slowly and uniformly, through the soil directly to the roots where it's needed most.

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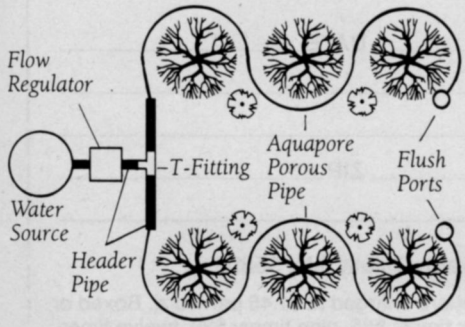

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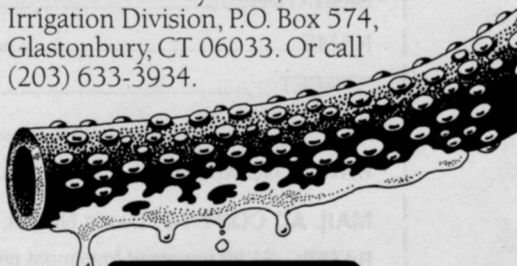
Think about it. Isn't Aquapore ideally suited for the franchise, office building, mall, hotel, condo, apartment building, and service station jobs that you install? If you've got grounds for an Aquapore system, write or call. We'll send you detailed information about the Aquapore system along with the name of your nearest distributor. Let us help you get to the root of your watering problems – with Aquapore. Write Moisture Systems, Professional Irrigation Division, P.O. Box 574, Glastonbury, CT 06033. Or call (203) 633-3934.



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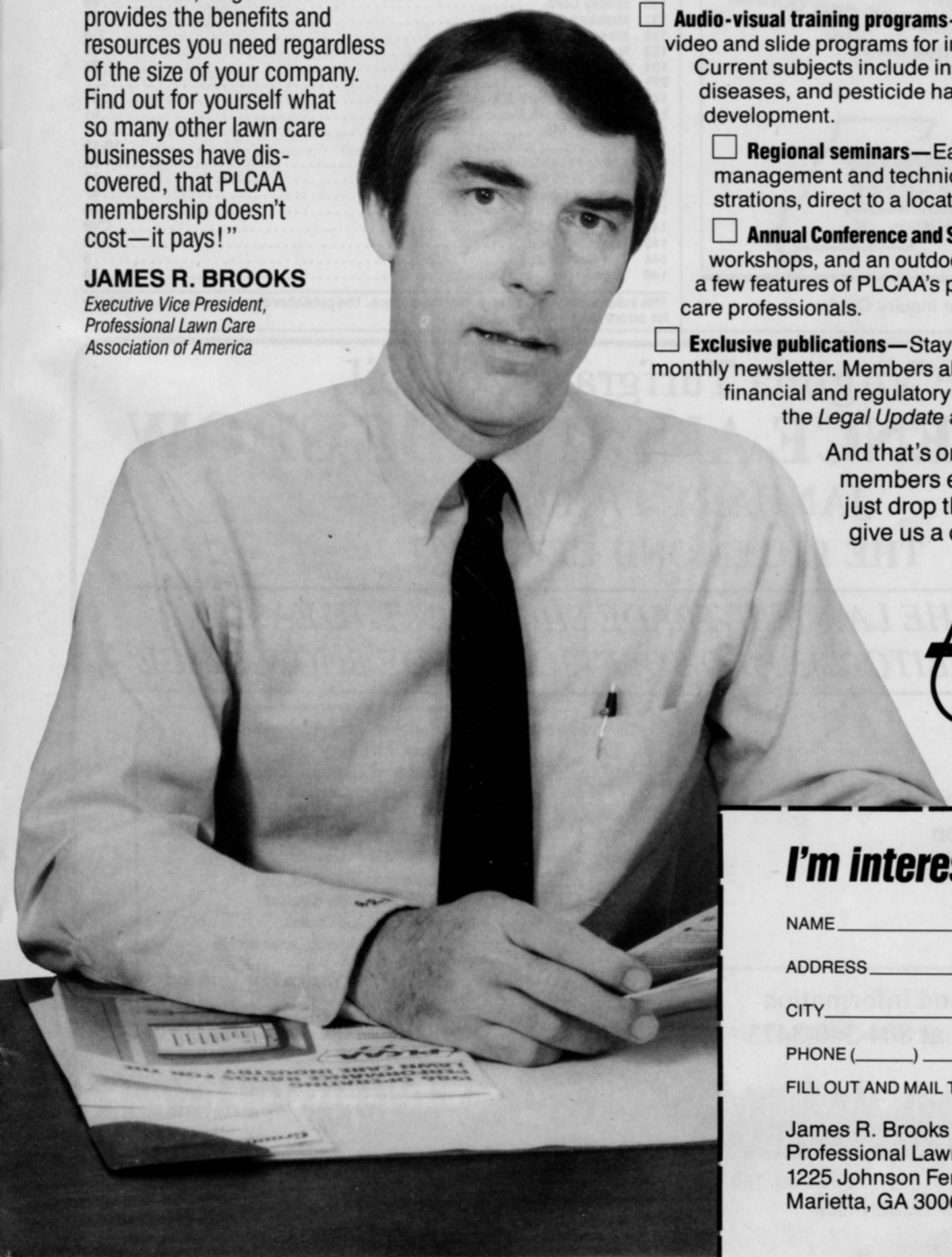

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- Lawn care session
- Sod production and installation session
- Erosion control session
- Athletic field session
- Public Sector
- Highway/rough turf

For registration and information call the VTC office at 804-340-3473

Dr. Reed Funk	Professor of Turfgrass Breeding Rutgers University
Dr. Lee Hellman	Professor of Turfgrass Entomology University of Maryland
Dr. Keith Karnok	Associate Professor of Agronomy University of Georgia
Kathy Copley	Former Editor Grounds Maintenance Magazine
Ken Giedd	Golf Course Superintendent King's Mill Golf Course
Greg Richards	LESCO Technical Representative

Other speakers include professors from Virginia Tech including:

Dr. H.B. Couch, Dr. Wayne Bingham, Dr. Jack Hall III, Dr. Richard Schmidt, Dr. Dave Chalmers and others

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OTF

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December 6-9, 1988
Cincinnati Convention-Exposition Center
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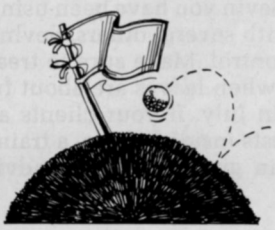
Golf Course



- The Thinking Superintendent
- Managing Golf Course Diseases
- Pythium Root Dysfunction: High-Sand Content Greens Problem
- Annual Bluegrass Management and Other Grass Alternatives
- Sand Topdressing Practices and Implication
- Putting Green Speed: A Superintendent's View
- Ecology of Black-Layer Formation on High Sand Content Greens
- Grubs: Basic Biology and Cultural Effects
- Real World of Computers
- Disease Models and Detection Kits
- Deep-Tine Aerification Techniques
- New Information on Core Cultivation Practices
- Agronomic Principles of Annual Bluegrass - Creeping Bentgrass Competition
- Fertilizing Through Your Irrigation System

Workshops

- Budgeting and Forecasting
- Tree Selection and Care
- Landscape Maintenance: Job Estimating
- Adding Color to the Landscape
- Risk Management and the Greens Industry
- Basic Management for First Level Supervisors

Lawn Service

- Chemical Spill Preparedness
- Agronomics of Lawn Renovation
- Grass Selection and Major Management Strategies
- Postemergent Control of Annual Grasses and Tall Fescue
- Lawn Irrigation: Problems in Programming Automatic Irrigation Systems
- Ecological Side Effects of Turfgrass Management Practices and Safe Alternatives to Lawn Chemicals
- Nitrogen Sources for the Lawn Care Industry
- Broadleaf Weed Herbicides: Proper Usage
- Iron and Micronutrient Fertilization of Lawns
- Patch Diseases: Identification and Control
- Grubs: Basic Biology and Cultural Effects
- Fungicides in Lawn Care Programming?
- Employee Right-To-Know
- Customer Contracts: The Time Has Come
- Lawn Care Operators: Current and Future Regulatory Concerns
- Collection Methods and Outstanding Accounts
- Cash Flow: Accident or Planned

Athletic Fields & Grounds

- Selection of Turfgrasses for Athletic Fields
- Soils: Understanding Soil Test Information
- Compaction and Soil Cultivation
- The ABC's of Athletic Field Fertilization
- Controlling Turfgrass Pests
- Athletic Field Maintenance Programs
- Renovation of Athletic Fields
- Irrigation System Installation and Maintenance
- Baseball and Softball Field Preparation
- Preventative Maintenance for Grounds Care Equipment
- Collection Methods and Outstanding Accounts
- Cash Flow: Accident or Planned
- Labor Retention: Employee Incentives
- Employee Right-To-Know
- Postemergent Control: Annual Grasses and Tall Fescue
- Creative Grounds Management Techniques
- Grubs: Basic Biology and Cultural Effects
- Broadleaf Herbicides: Proper Usage
- Agronomics of Turfgrass Renovation
- Plant Growth Regulators: Tool for Professional Grounds Managers

Ohio Turfgrass Foundation

Anyone involved in the turf industry is invited to attend the Ohio Turfgrass Foundation Conference and Show. For complete information and a conference program, contact:

Dr. John Street
c/o Ohio Turfgrass Foundation
2021 Coffey Road
Columbus, OH 43210
(614) 292-2601

Circle No. 134 on Reader Inquiry Card

PROBLEM MANAGEMENT

by **Balakrishna Rao,** Ph.D.

Controlling nutsedge

Problem: *Is there any weed control that will stop nutsedge? (Texas)*

Solution: In response to an answer in the June 1988 issue of *Landscape Management* concerning managing nutsedge in Texas, I appreciate receiving the following comments by Greg Richards of Lesco:

"Lesco Image herbicide is registered for nutsedge control. Image alone at a one quart/acre or Image + MSMA are by far the leading measures of control for nutsedge in Texas. Image is labeled for use on warm-season turf, so it is not used in the tall fescue market in Texas. It specifically controls purple nutsedge. Basagran is mainly for meadows. Most nutsedge in the south is purple, although some yellow nutsedge does exist in northern Texas."

It is important to read and follow label specifications. Image label information suggests the following: "Image can be used to manage several weeds in established warm-season turfgrasses, such as Bermudagrass, centipedegrass, St. Augustinegrass and zoysiagrass. Actively growing weeds are easy to manage. Treated turfgrass may have a compacted growth habit and may inhibit seed head development without affecting its vigor. Avoid drift onto nearby desirable plants like vegetables, flowers or ornamental plants. The label recommends the use of a spray indicator dye such as Lesco Tracker to prevent overlaps."

Refer to the lable specifications for further details on other precautions and uses.

Closing the door on beetles

Problem: *A number of our clients are concerned about elm leaf beetle adults moving inside the house now. Our question is why are they entering houses and would they cause any injury? How do you get rid of them? We have been using Sevin in the past. (PA)*

Solution: Adult elm leaf beetles tend to move inside houses, garages, under shingles, or other protected sites indoors or outdoors for overwintering. These insects often become a nuisance during autumn. Another reason may be because of excessive heat outside. These, as well as some other insects, may enter houses where there is a cooler environment.

To manage the pests, an understanding of their life history would be useful. Overwintering adults fly back to elm trees in spring from adjacent protected sites and feed on expanding elm leaves. Their feeding causes small, irregular holes on leaves. Each female can produce 600 to 800 eggs on leaves. Eggs hatch into tiny, black, grub-like larvae which feed on only lower sides of leaves and skeletonize them. As the larvae mature they become green to yellow with lateral black stripes. Affected foliage will turn brown, and the tree may produce a new flush of leaves which may also be eaten by the larvae. This extensive feeding activity by the adults and larvae year after year can cause the plant to become more susceptible to other disorders and/or eventually kill it.

After completing the feeding period, larvae move down along the branches and pupate on the ground at the base of the tree or on cracks, etc. These become adults in a week or two and return to the same tree or other elm trees for laying eggs. In the late summer and fall, adult beetles move out of elm trees and search for suitable sites for overwintering.

The insecticide Sevin you have been using is recommended along with several others. Sevin should provide adequate control. Make sure to treat when larvae first appear, when leaves are about fully expanded and again in July. If your clients are concerned about the pests inside houses, a trained pest control operator can give the proper advice and control.

The best time to dethatch

Problem: *When is the best time to dethatch and topdress a football field? We are interested in this service and would be dealing with warm-season turfgrasses, like Bermudagrass, in the South and cool-season turfgrasses in the North. We would appreciate your comments. (North Carolina)*

Solution: Generally, more than ½ inch of thatch is considered to be potentially detrimental to the turfgrass culture and quality. However, experts dealing with athletic field management consider about one inch of thatch desirable on a football field. If the thatch layer exceeds the desirable thickness, dethatch cool-season grasses in early fall while they are still growing. If this operation interferes with ball games, then consider doing it in spring. Warm-season grasses, like Bermudagrass, can be dethatched in the spring just before greenup.

After dethatching, topdress the area with the same soil type or 100 percent sand. Do not use organic matter on a sand-based ball field. Organic materials will seal the field in time and will cause poor water movement, resulting in surface water accumulation. If there is a problem of standing water, consider improving the drainage by installing vertical or French drainage systems.

Balakrishna Rao is Manager of Technical Resources for the Davey Tree Co., Kent, Ohio.

Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.

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